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ABSTRACT

The Western Interstate Commission for Higher Education (WICHE) received a year's grant from the Council on Library Resources to design and develop a library network for western states. Functions and program plans were developed for the newly established networking organization, Western Interstate Library Coordinating Organization (WILCO), with programs in resource sharing coordination, continuing education for librarians, and library and information science research. Major activities of the fourth quarter included: (1) outlining WILCO programs; (2) identifying goals and tasks to guide regional resource sharing; (3) beginning to execute coordinating functions. The project has demonstrated the value of a multistate organization, based on state library agencies, to catalyze and sustain cooperative activities of individual libraries and networking organizations. The appendices which form the bulk of this report include WILCO program plans and budget for fiscal year 1977, and several working papers describing the organization. (Author/KP)

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INITIATING THE DESIGN AND DEVELOPMENT OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

FOURTH (FINAL) QUARTERLY REPORT

APRIL - AUGUST 1976

CLR Grant 614

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ABSTRACT

During the final (expanded) quarter for the CLR-funded Project, functions and program plans were developed for the newly-established Western Interstate Library Coordinating Organization (WILCO). Most significantly, Project staff and the Executive Board of the Project Steering Committee sponsored a series of meetings with the representatives of major organizations concerned with library networking in the West to formulate a set of goals and outline tasks for coordinating resource-sharing development over the next three years. The WILCO Director, along with other representatives from the West, participated in meetings hosted by the Library of Congress to discuss development of the national library network; the results of this Project were important contributions to those meetings.

The Project as a whole has demonstrated the value of a multistate organization, preferably based on the state library agencies, to catalyze and sustain cooperative activities on the part of individual libraries and networking organizations. WILCO provides a forum for discussion of regional resource sharing interests, a relatively unbiased source of information on network planning and technology, an information exchange to support continuing education for librarians and lay leaders, and a capability to perform library and information science research. As proof of the Project's success, members of the Western Council of State Librarians who provide core funding for WILCO agreed to an increase of 50% in membership fees to support basic program activity in the coming year. Colorado is joining WILCO as the tenth member state, and it is anticipated that other western states will join in the future.

ACKNOWLEDGMENT

The work reported herein would not have been possible without the financial support of the Council on Library Resources, Inc. and the state Library agencies in Alaska, Arizona, California, Idaho, Montana, Nevada, Oregon, South Dakota and Washington. Additionally, activity on the Cost and Funding Study mentioned in this report was supported in whole or in part by the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred. The efforts of a number of librarians and other interested persons, in the West and elsewhere, in helping to develop the concepts for a western bibliographic network and in helping to write or review the proposals submitted by WICHE to CLR and USOE are gratefully acknowledged. The participation of members of the Steering Committee Executive Board (Vincent Anderson, Gerald Rudolph, Roderick Swartz, David Weber) and representatives of utilities and service centers (Lura Currier, James Kennedy, Gerald Newton, H. Paul Schrank, Donald Simpson, Earle Thompson) in several lengthy meetings to discuss coordination of networking in the West has been most helpful, and has been sincerely appreciated by the Project staff.

INITIATING THE DESIGN AND DEVELOPMENT OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

FOURTH (FINAL) QUARTERLY REPORT

APRIL - AUGUST 1976

TABLE OF CONTENTS

Page

Abstract and Acknowledgment i
Table of Contents ii

I. INTRODUCTION. 1

II. PROJECT MANAGEMENT AND STAFFING 2

III. PROJECT ACTIVITIES. 3

A. April 4

B. May 4

C. June. 5

D. July. 7

E. August. 8

F. Presentations and Publications during the Quarter 9

IV. DELIVERY OF THE "PRODUCTS" SPECIFIED IN THE GRANT 10

V. FINANCIAL REPORT SUMMARY. 16

APPENDICES TABLE OF CONTENTS. 17

A. Minutes of the Second Steering Committee Meeting, 17 July 1976
B. Minutes of the Western Council Meeting, 17 July 1976
C. WILCO Program Plan and Budget for FY77
D. Serials Survey Update
E. Telecommunications and Message Processing for Library Networking
F. Continuing Education Plan of Action - 1976/77
G. *Library Networking in the West: The Next Three Years*
H. Western Council Charter
I. WILCO Brochure and Newsletters #3, #4
J. USOE Cost and Funding Study Reports
K. Economic Issues in the Networking of Library Technical Support Services
L. Financial Report
M. Record of Distribution

INITIATING THE DESIGN AND DEVELOPMENT OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK

FOURTH (FINAL) QUARTERLY REPORT

APRIL - AUGUST 1976

I. INTRODUCTION

This is the fourth and final quarterly report on the progress of the Western Bibliographic Network Project being performed by the Western Inter-State Commission for Higher Education (WICHE) under terms of a grant from the Council on Library Resources (CLR). A separate report, The Founding of the Western Interstate Library Coordinating Organization (WILCO), is a narrative summary of the Project's activities and findings and has been prepared for wide distribution. Separate reports, listed here in Appendix J, describe the results of the Cost and Funding Studies, supported by a grant from the U. S. Office of Education (USOE), which have been performed as a part of the network design project.

Previous quarterly reports have described: (1) the events leading up to the submission of a proposal to CLR for a project to design and develop a bibliographic resource sharing network including all types of libraries in the 17 western states and British Columbia; (2) staffing the Project; (3) a survey of component organizations concerned in western library networking; (4) the selection of an organizing Steering Committee; and (5) an initial definition of the role and structure of WILCO as a coordinating agency to provide a forum and act as a catalyst for other organizations with resource sharing concerns.

Activities of the fourth quarter (extended for reporting purposes through August) in which the CLR-funded Project was completed, were concerned mainly with outlining WILCO programs for the coming year, identifying goals and tasks to guide regional resource sharing over the next three years, and beginning to carry out coordinating functions. The significance of these activities has been addressed in the separate narrative report; in this quarterly report the activities are simply recorded and documentation resulting from the activities are included as appendices.

The bottom line for the Project was the creation of a viable networking organization in the western states. This has been accomplished through the restructuring of the WICHE Continuing Education and Library Resources Program into the Western Interstate Library Coordinating Organization (WILCO), with programs in resource sharing coordination, continuing education for librarians, and library and information science research most appropriately performed by a regional agency. WILCO members are ten western states. The State Librarians of these states form the Western Council, WILCO's policy-making body. Through the State Librarians, as well as the advisors to the staff and Council who represent resource libraries and the utilities and service centers providing networking mechanisms to western libraries, the whole library community should benefit from WILCO's activities.

The interstate coordinating organization established as a result of the Project is a unique and innovative structure whose development may suggest a pattern for a national library network. Rather than be an operator of automated services to individual libraries, as is the traditional library network role, WILCO has become a coordinator for the whole range of library resource sharing activities with the objective of helping all western libraries in making most effective use of the networking mechanisms offered by utilities and service centers. WILCO's state library agency base provides an institutional setting offering a maximum degree of flexibility in meeting resource sharing needs as well as the political and legal backing and expertise needed to operate in the common interests of all libraries. WILCO thus has the opportunity to become an integral part of the West's development of its own resource sharing capabilities as well as the region's ability to participate effectively in the evolving national library network.

Although the result of the Project may be somewhat different from the concept of an operating library network as embodied in the grant proposal, we feel that the identification of the role for a coordinating organization distinct from the brokering or operation of automated services, and affirming the importance of the State Librarians in stimulating and supporting cooperation among all libraries, has been well worth the money and effort expended.

II. PROJECT MANAGEMENT AND STAFFING

During this quarter, the Executive Board of the organizing Steering Committee*, consisting of H. Vincent Anderson, South Dakota State Librarian; Gerald A. Rudolph, Director of Libraries, University of Nebraska; Roderick G. Swartz, Washington State Librarian; and David C. Weber, Director of Libraries, Stanford University, took the lead in exploring how the nascent WILCO could best carry out its coordination function. In addition, because the members of the Executive Board were also connected officially with the utilities and service centers located within the West, they assured the very fruitful participation of these major components in discussions leading to an articulation of how these components, WILCO, state library agencies, and major resource libraries might fit together most effectively to advance western library resource sharing. With their assistance, meetings were arranged and conducted with Hank Epstein, BALLOTS Director; Lura Currier, Director and Earle Thompson, Board Chairman, for the Pacific Northwest Bibliographic Center (PNBC), Mary Jane Reed of the Washington Library Network (WLN), H. Paul Schrank, Jr., Board Chairman for the Ohio College Library Center (OCLC), Donald Simpson, Bibilographical Center for Research (BCR) Director, and Gerald Newton, representing the California State Library and its Union Catalog (CSLUC). James Kennedy, Director of AMIGOS Bibliographic Council, was subsequently added to the discussion group.

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* Joanne Arnold, Acting Vice-Chancellor for Faculty and Staff Affairs, University of Colorado, had been elected Chairwoman of the Executive Board, but in April was forced to resign because the pressure of other duties made it impossible for her to attend scheduled meetings.

The major product resulting from these discussions was a draft of a document outlining goals and tasks for coordinated resource sharing development in the West during the next three years. This document, now ready for widespread distribution for review and comment, provides guidelines for the networking components in the West (including state library agencies) to concentrate efforts on specific objectives on the road to creating an "integrated bibliographic collaborative" wherein autonomous organizations can work together cooperatively to meet regional library needs while preserving their ability to make decisions that are in the best interests of their own organizations.

The Project organizing Steering Committee met for the second and final time in Chicago on 17 July, just prior to the American Library Association Annual Conference. The Committee reviewed the status of the project and discussed the latest draft of Library Networking in the West: The Next Three Years. In general, the content of the document met with the approval of committee members. Several members urged that a formal mechanism be provided in the WILCO structure to allow participation in policy-setting by representatives of major resource libraries and the directors of the utilities and service centers. The minutes of this meeting are included as Appendix A.

Following the Steering Committee meeting, the Western Council met to consider the Steering Committee's comments as well as the current and projected program activities for WILCO. The Western Council was in agreement that participation in WILCO, and in coordination of resource sharing, ought to be shared with the other organizations concerned, but did not make a final decision as to what particular structure for WILCO might be best. The minutes of this meeting are included as Appendix B. Another Western Council meeting was to be scheduled at the earliest opportunity to resolve the question on a governance structure for WILCO. Because of many schedule conflicts, this meeting has been delayed until 25-26 October 1976.

Maryann Duggan, as noted in the Third Quarterly Report, left WICHE during May, and Eleanor Montague, as WILCO Director, took her place as Program Director for the WICHE library program (i.e., WILCO). The Project Secretary, Louise Martin, left in August to enter the doctoral program at Indiana University. A new and very able secretary for WILCO, Mary Haenselman, was hired to fill that important position.

III. PROJECT ACTIVITIES

The last quarter was a busy one as Project staff began planning and carrying out coordinating functions. The major activity was preparation and review of the goals and tasks for interstate coordination of resource sharing, and the development of concepts for carrying out the tasks relating to the top priority needs of the utilities and service centers for interconnection via better telecommunications. In addition, staff attended several state and regional library association meetings in order to describe WILCO and its programs, and to establish contacts with many librarians in the West. The quarter, and Project, ended with a general acceptance of WILCO and approval of its programs, but with the need to translate plans into accomplishments quickly.

A. April

In April, following on the meetings of the Steering Committee Executive Board and Western Council described in the Third Quarterly Report, Project staff developed a detailed program plan and budget for Fiscal Year 1977 (Appendix C). This budget called for a 50% increase in the fees paid by the State Librarians to support the WICHE library program (at this point just renamed WILCO) at a level of two professionals and a secretary, plus providing matching funds for a grant expected from USOE which would fund one and one-half professionals to develop a statistical data base for library planners. This budget did not provide funding for one additional professional needed to carry out the continuing education coordination activities desired by the Western Council, but there were hopes that other states might join WILCO or additional grants might be received that would provide coverage for that position.

Maryann Duggan attended the first meeting of library network directors sponsored by CLR and held at the Library of Congress (LC). This meeting explored a number of areas of concern in developing a national library network. The next day, Ms. Duggan visited CLR to review the status of the Project and came away with the impression that the restructuring of the WICHE library program into WILCO, with a coordinating rather than an operating role, was an unexpected outcome. Staff discussed this impression with members of the Western Council, and as a result several western State Librarians took advantage of the Chiefs of State Library Agencies (COSLA) meeting in Washington in May to visit CLR to discuss their reasons for establishing WILCO.

B. May

Early in May, the Steering Committee Executive Board met for the second time, in Seattle, Washington. Donald Simpson, BCR Director, Mary Jane Reed, Washington Library Network, and Lura Currier, PNBC Director, also attended the meeting at which the need and means for cooperation among WILCO, utilities, service centers, and the Steering Committee Executive Board were explored. This meeting resulted in the allaying of some of the concerns expressed by the service center directors that WILCO might duplicate or compete with or in any way exert control over the service centers, and consequently those directors agreed to cooperate with WILCO activities that supplemented and enhanced those of the service centers. Once again, the Executive Board expressed the desire that a networking plan be developed by Project staff, both for completing the current Project and for coordinating western networking development in the future.

During the remainder of the month, staff worked to meet the Executive Board's request. As a first attempt, we took the approach of identifying library requirements for automation and networking support. Because this approach did not seem to lead to specific objectives and tasks that dealt clearly with the interrelationship among libraries, utilities, service centers, and state library agencies, we abandoned that avenue in favor of a document listing major goals for resource sharing, general tasks to be accomplished within a three year time frame leading to those goals, and the assumptions about the networking environment that guided our thinking. The first draft of this document, Library Networking in the West: The

Next Three Years, was distributed to the attendees at the May meeting and to Paul Schrank, Chairman of the OCLC Board, with an invitation to attend the next meeting scheduled for 3-4 June in Palo Alto, California.

On 17 May, Paul Janaske, USOE Program Officer for the Cost and Funding Studies grant being performed by WILCO as an adjunct to the CLR grant, made a site visit. Project staff reviewed the progress of that grant, indicating that although some responses to the survey questionnaires were slow in coming in and some of the data were not as complete as had been hoped, almost all of the 100 libraries in the survey sample could be counted on to complete their participation. The results of the study are being quite eagerly awaited by many of the participating library directors.

Late in May, WILCO staff were invited by BCR to a meeting of 26 academic and state librarians from the states in BCR's service area for the purpose of identifying their needs for new or improved network services. As these librarians noted by the end of the meeting, their needs were still essentially those expressed in the CLR grant proposal serving as the basis for the current Project, with the addition of assistance in document conservation and preservation. In general, the meeting confirmed that BCR was on the right track in expanding its brokering of automated services and in placing a high priority on services in support of interlibrary loan.

Also in May, our previous survey of serials data bases in the West was expanded to include the University of California Union List of Serials (UCULS) and the Nevada Union List of Serials. Appendix D contains the updated report on western union serials data bases. WILCO staff also provided consultative assistance to the committee responsible for developing a union list of serials for the State of Montana. This committee selected MINITEX as the contractor to develop the list after considering Blackwell North America and Eastern State College of Washington.

C. June

In June the Executive Board, network organization representatives, and WILCO staff met to discuss the draft of Library Networking in the West. During two and one-half days of intensive discussion, the document was twice redrafted to represent the latest thinking of the participants. By the end of the meeting, there was general agreement on the goals and tasks that should guide western networking development over the next three years, in the view of the meeting participants. After final comments of these persons were added, a revised draft of the document was distributed to all western state librarians, directors of western Association of Research Library institution libraries, and the full Steering Committee for their review and comment, and in preparation for the Steering Committee meeting scheduled for July.

Karl Pearson of the staff took advantage of the Palo Alto meeting to visit the Nevada and Utah state libraries to talk about WILCO progress and prospects. He also visited Elizabeth Feinler, Manager of the Arpanet

Network Information Center at Stanford Research Institute to explore the applicability of that computer network to library telecommunications needs. He also visited Edythe Moore, Librarian of the Aerospace Corporation and a member of the Steering Committee, and observed the on-line bibliographic system developed for that organization.

On 9 June, Eleanor Montague and Karl Pearson visited CLR to explain first hand the reasons why WILCO had been set up as a coordinating organization rather than as a traditional library network. We reported on the very promising outcome of the Palo Alto meeting and pointed out the willingness of the Western Council to pay a fee increase to support WILCO in the coming year. We also attempted to clarify the relationship between WICHE and the Western Council, emphasizing that WILCO was a continuation of the WICHE Continuing Education and Library Resources program funded by the State Librarians since 1967.

The next day we visited Alphonse Trezza, Executive Director of the National Commission on Libraries and Information Science (NCLIS). He appeared to be quite favorably impressed with the direction the Project was taking, particularly because the State Librarians were playing such an active role. He agreed with the concept of interstate coordination as an appropriate function for WILCO in view of existing network component organizations carrying out operational functions. He did suggest, however, that consideration be given to setting up WILCO as a separate organization as the administrative agency for an interstate library compact, rather than remain a part of WICHE which is the administrative agency for an interstate higher education compact.

Karl Pearson also visited Charles Rabel at the Library of Congress to explore the technical feasibility of WLN and BALLOTS copying the software being developed by LC and the New York Public Library to provide access by that library to LC's automated process information file (APIF), MARC, and subject heading files. For WLN, which has equipment and system software similar to that used by LC and NYPL, it appears to be a simple procedure to copy the NYPL/LC software. BALLOTS, however, does not have the CICS software required for communications handling in accessing the LC computer.

Eleanor Montague spent a full day talking with Edward Basinski who was interviewing networking directors to garner ideas and information about LC's possible roles in developing a national library network. She also attended a conference on development of a state network for Colorado. She reviewed the status of the Project briefly with memebers of the Executive Committee of the WICHE Commission.

A visit to WILCO by Ronald Miller, Director of NELINET, and Gene Palmour, serving in their roles as consultants and evaluators of the Cost and Funding Study, provided the opportunity for staff to explore networking telecommunications needs and the possibility that a national periodicals center might be established. The discussion on telecommunications confirmed staff's view that there was a necessity to design, on a national basis, a comprehensive telecommunications system for library use rather than rely upon a piecemeal approach by separate organizations interested mainly in meeting just their own needs. This view was incorporated in the document Telecommunications and Message Processing for Library Networking: A System Concept and Proposal Outlines (see Appendix E) intended for use as a basis for discussion at the July meeting of utility and service center directors as the next step in beginning to take action on the tasks to accomplish one of the goals expressed in Library Networking in the West. We see the need to integrate the several current activities being performed by the Information Science and Automation Division of ALA, NCLIS, the Federal Library Committee, RLG, and library networks in the telecommunications area to develop an overall plan for meeting the communications requirements of all kinds of libraries throughout the country.

D. July

In July, in performance of responsibilities in one of the three WILCO program areas, the document WILCO Continuing Education Plan of Action - 1976/77 was drafted (see Appendix F). This plan provides for coordination of continuing education for librarians within WILCO states, and between the region and CLENE, primarily through establishment of a clearinghouse (WESTEX) and information exchange about continuing education materials, courses, and other resources. The Steering Committee, meeting on 17 July (see Appendix A), reviewed the plan and found it to be generally sound, albeit very ambitious in relation to the staff resources available to carry it out. It will be necessary to distinguish priorities and to work very efficiently to realize the most important objectives for continuing education cordination in the coming year.

The Steering Committee also reviewed and in general agreed with the content of Library Networking in the West (see Appendix G for latest draft of the document). A basic issue was raised respecting for whom WILCO was speaking, and whether the document was WILCO's view or an attempt to represent the views of the western library community as a whole. While content with the response that the latter viewpoint was intended, the Steering Committee raised the question concerning what structural provision should be made in WILCO for participation by librarians and network component directors other than the State Librarians on the Western Council. Lengthy discussion failed to lead to a specific recommendation, but two structures were explored. The first structure, proposed at the June meeting in Palo Alto, envisioned two permanent groups chartered by the Western Council to be responsible for WILCO guidance within specified areas of interest, with the Western Council retaining authority for ratifying major policy decisions affecting the legal exercise of State Librarian's duties. One group would represent the directors of major resource libraries in the West, defined as any library with a collection on which other libraries would wish to draw through interlibrary loan. The other group would represent the directors of organizations responsible for the technical development and operation of networking services. A second structure suggested during the Steering Committee meeting proposed a governing board for WILCO made up of representatives from each of the two groups and from the Western Council.

The Western Council met on the evening of 17 July and continued their discussion of a WILCO governance structure. The Council expressed their desire to have other librarians and technical component directors participate in WILCO governance, but many members were reluctant to expand the Council itself to do so. Staff pointed out that the current Western Council charter (see Appendix H) provides for Council appointment of advisory groups, and that it should be relatively easy to revise the charter both to reflect the establishment of WILCO and to incorporate explicit provisions for participation in WILCO guidance by other gorups. Council agreed to try to reach a decision on this matter at the next meeting of the Western Copncil (now scheduled for 25-26 October 1976).

WICHE itself began a reorganization as the new Executive Director, Phillip Sirotkin, sought ways to increase the organization's effectiveness. Sirotkin wishes to increase interaction among the different programs at WICHE so that the expertise of the staff can be shared across program boundaries. In addition, the governors and legislators of many of the compacting states have questioned the wide-ranging scope of WICHE operations. WICHE staff is preparing a mission and role statement, and current programs are undergoing review to examine how closely they fit WICHE's purposes. As of the date of this report, these activities have not progressed to the point where their effect upon WILCO can be predicted.

E. August

Eleanor Montague attended the second meeting of network directors hosted by the Library of Congress on 9 August. Other attendees from the West were Roderick Swartz and David Weber; James Kennedy of AMIGOS attended also. The western representatives described how they had collaboratively developed networking goals and tasks as documented in Library Networking in the West and indicated that top priority concerns were bibliographic utility to LC connection so users could gain access to LC files, and data concentration for the service centers so data transmission costs could be reduced. Eleanor Montague was appointed to a four-person subcommittee chaired by Larry Livingston of CLR to produce a draft list of tasks and goals for a national library network for discussion at a December meeting of the network directors.

Following Eleanor's return from the LC meeting, Project staff prepared a detailed letter commenting upon the document Henriette Avram had distributed for discussion at the meeting. Eleanor offered WILCO's full support and assistance to Henriette Avram and others engaged in exploring LC's role in national library networking and resource sharing.

An immediate benefit from WICHE's concern with cooperation among its programs was the discovery that staff could obtain the assistance of interns for a 12-week period to tackle specific projects. WILCO obtained the services of Scott Gassler, who holds an MLS degree and a Master's degree in economics, has experience as a librarian, and is pursuing a doctoral program in economics, to prepare a paper discussing the economic issues of library networking (see Appendix K). The Resources Development Internship Program of WICHE locates students or recent graduates with the special skills required to meet the needs of various agencies in the WICHE states for assistance in carrying out special, limited term, projects. This provides the opportunity for the interns to gain very practical experience in their field while at the same time offering a source of expertise at low cost to agencies that can make good use of such assistance. Given the success of having Scott Gassler assist us in looking at the economics of networking, we have added two other interns to help staff to explore the delivery of library services to inmates and staff of correctional institutions and the use of instructional technology for continuing education in librarianship.

As the next step in developing tasks for the goal of interconnecting the bibliographic utilities and service centers, and in response to a request from Henriette Avram for networking ideas, WILCO worked with the directors and staff of AMIGOS, BALLOTS, BCR and WLN to prepare concept papers outlining proposals for interconnection. These concept papers are now in the process of refinement, and may lead to the preparation of formal proposals to appropriate funding agencies.

This recitation of WILCO activities during the past several months probably gives the impression of a log compiled by an established organization rather than the wrap-up of final details attendant upon completion of a year-long project. This is exactly what has happened. The CLR Project has melded into WILCO, which now has a life of its own. Thus, although this is a final report in respect to the CLR grant, it describes some activities that represent the beginnings of other projects or the continuation of some of the objectives for the grant.

F. Presentations and Publications During the Quarter

At the end of April, Eleanor Montague gave presentations to the Oregon College and Research Library Chapter of the Oregon Library Association and the Oregon Library Association annual meeting describing the Project and its current status. In early May, Eleanor Montague gave a one hour presentation on WILCO and network development to the annual meeting of the Washington Library Association. Karl Pearson gave a presentation on WILCO in early May to the Idaho Library Association, in addition to conducting a session on library networking in general. Both Eleanor and Karl made presentations at the Montana Library Association annual meeting. On April 30, Karl made a brief presentation on WILCO to an ILL Update Workshop sponsored by the Colorado Library Association. He participated in a session on telecommunications for library networks at a meeting of the College and University Division of the Colorado Library Association on May 14.

In June, Eleanor Montague attended the network directors meeting hosted by LC, and a second meeting in August. She also participated in a meeting of Colorado librarians to discuss networking development for that state.

Eleanor, Karl and Maryann Brown attended the American Library Association annual conference in Chicago in July, where they made a number of contacts in furtherance of WILCO's programs. In August, Eleanor and Karl attended the Pacific Northwest Library Association annual meeting, where Eleanor gave a major presentation on WILCO's activities and plans.

During the quarter, the following WILCO items were published:

(1) Library Networking in the West: The Next Three Years
(2) WILCO Continuing Education Plan of Action - 1976/77 (draft)
(3) Telecommunications and Message Processing for Library Networking (draft)
(4) WILCO brochure
(5) WILCO Newsletter issues #3 and #4
(6) The Establishment of WILCO: A Narrative Report on the CLR-funded Project to Initiate the Design and Development of a Western Interstate Bibliographic Network
(7) Final Report of the Cost and Funding Studies
(8) Economic Issues of Library Networking
(9) Self-Administered Instruments for Library Cost Analysis

WILCO staff also prepared a contract for provision of instruments and processing assistance to Fairleigh Dickinson University Library, New Jersey, for a self-administered analysis of costs pre- and post-introduction of OCLC service there. We also submitted a small proposal to the Colorado State Library (which has been funded) to conduct a survey of data bases within the state and recommend a model for creating a union data base for monographs.

IV. DELIVERY OF THE "PRODUCTS" SPECIFIED IN THE GRANT

The final revision of the grant proposal, dated 10 June 1975, listed 17 "products" to be accomplished. The following paragraphs indicate how each "product" has been completed as an outcome of the Project.

1. Employment of a Design Staff at WICHE headquarters which will include a Project Director and a Systems Analyst.

Staffing of the Project took much longer than predicted. The Systems Analyst was hired on 15 September, 1975 and the Project Director began work on 1 December, 1975. This delay in staffing caused a two-month delay in completing the Project.

2. Establish the Network Steering Committee as described on Pages 16 and 17 of the proposal.

The Steering Committee was appointed in January 1976 and met in February and July. The Executive Board met monthly with Project staff and networking component representatives or the Western Council from April to July. The contribution of the Steering Committee, and especially of the Executive Board, was most beneficial in defining an appropriate role for WILCO vis-a-vis other existing organizations.

3. Produce a document which will review existing networks and systems in the West, or of potential interest to the West, and which could serve as a component part of the Western Network.

A draft of "A Review of Potential Components for the Western Bibliographic Network" was published in January 1976, and a final version was published in March 1976. Compilation of this information pointed out the wealth, diversity, and success of existing networking organizations in the West.

4. Produce a document which will present "hard data" on the systems requirements for a Western Network.

AND

7. Produce a document which will technically define the specific Network services desired by potential members of the Western Network.

Neither of these "products" has been specifically accomplished. Both appear to be based on a concept that the "Western Network" would be an integrated operating organization concerned with delivering products and services direct to member libraries. Because WILCO evolved instead as a coordinating rather than a service organization, with membership based on the State Libraries instead of individual libraries, these "products" are not germane to the Project. Coordination services, rather than "Network" services, are described in Library Networking in the West and the WILCO brochure, which might be considered as partially fulfilling the intent for these two "products." The priorities for desired network services listed on page 66 of the grant proposal were essentially reaffirmed at the meeting of BCR users which WILCO staff attended in May 1976; in general, librarians want most those services that are being already supplied by OCLC, SDC and Lockheed, etc., plus help in finding locations for items needed via interlibrary loan.

5. Produce a document which identifies the desired bibliographic record content and data base structure of a Western Network.

Current thinking of staff and advisors as to the content and structure of data bases for western library needs is reflected in Library Networking in the West. But, our ideas are still evolving. There is general agreement that utilities require the capability to receive and output catalog records (both for monographs and for other types of material) in the complete MARC format and content. However, there are a number of data base issues that remain unresolved pending further definition of a national library network, the outcome of allowing users to access LC files, potential acquisition of minicomputers by the service centers, the proliferation of in-library minicomputer systems, and the development of interlibrary communication capabilities. In general, WILCO staff believes these issues will be addressed in accordance with the following guidelines:

a) At least one copy of an authenticated machine readable catalog record must be accessible to any library using an automated system within 24 hours of a request for the record.

b) Records used to identify locations for library materials need be neither complete nor authenticated (although authentication is highly desirable); should permit access by author, title, and subject; and must provide access by a unique and standard identifier (LC card number or ISSN being the most obvious candidate).

c) For its own use, an individual library may not need a complete catalog record and may be willing to accept unauthenticated records. However authentication of record access points (author, title, subject, unique identifier) is almost mandatory from a system point of view.

d) There is probably a need for multiple subject authority files, with accompanying authentication procedures, to satisfy differing requirements among different types of libraries (particularly in respect to special libraries).

e) Cataloging data must be available at the same time that material is first published in order that libraries need not delay getting new items into circulation.

These data base issues should be addressed on a national basis so that parochial solutions do not hinder or make more expensive the eventual goals of allowing any library to find where in the country a particular item is, and of cataloging an item only once. The issues are also greatly affected by the growth and change of regional and national organizations involved in automated support of networking. The world of the mid-1980's is bound to look very different from that of 1976 in respect to the roles played by LC, OCLC, and the other utilities and service centers.

6. Establish a network liaison team in each of the 17 states and British Columbia for the purpose of providing grassroots input and feedback.

Several of the states have networking task forces or similar groups. Project staff have had some contact with these groups through attending a few of their meetings and visiting with them at library association meetings, but have not worked closely with them, nor have we sought to establish such groups in other states. In part, this limited use of liaison teams has been due to a lack of time on our part, our preoccupation with identifying WILCO's role and future program, and our concentration on working with the utilities and service centers. While staff should pay more attention in the future to maintaining contacts in each state with key people involved in cooperative activities, a formal mechanism providing teams in each state would be expensive and time-consuming, with no clear additional benefit over existing informal mechanisms. In any case, each state has somewhat different conditions that shape the need, composition, and activities of networking groups and no single pattern would be appropriate for all states. However, the problem of maintaining interactive communicaton among WILCO staff, state leaders, network staffs, and the "grass roots" practicing librarians in the region is a continuing, very real, problem requiring some innovative solutions. A primary function for WILCO is to foster and stimulate communication among western librarians, and we will actively explore better ways of carrying it out.

8. Produce a document containing legal and technical details on the interconnection of the WLN and BALLOTS data bases.

Interconnection of BALLOTS and WLN was included as a task under Goal 2 of Library Networking in the West. Because the utility directors accorded higher priority to a connection between their computers and the Library of Congress files, the matter of interconnection between the utilities was not considered at length. While data can be exchanged between the utilities by computer tape, an on-line connection would be expensive because the two computer systems use different teleprocessing disciplines and software. A bilateral project to connect those two utilities might not be so beneficial as would be their participation in designing and developing a generalized national communications network linking all the utilities and users. Assuming that users have access to LC files, and that holdings data files are maintained at state or regional levels, there would seem to be a less urgent need for interconnecting the utilities than was assumed at the time the proposal was written.

9. Produce a document recommending the best way to interconnect the three Bibliographic Centers (CSLUC, PNBC, and BCR) for improving interlibrary loan services and for future input of holdings information into the WLN and BALLOTS data bases.

Each of the bibcenters appears to have adequate capability for handling the great majority of location requests using its own resources. There is no clear cut advantage to secondary or tertiary regional clearing procedures. Input of holdings data in the future is likely to be handled as a byproduct of libraries' use of OCLC, WLN or BALLOTS cataloging services. The bibcenter card files will likely be closed as libraries shift from manual to automated cataloging. The case for converting the existing card files to machine-readable form has yet to be made. Library Networking in the West goals 7 and 8 state that union finding lists should henceforth be maintained on a state or regional basis by merging available machine-readable data, in place of continuing to send cards to a bibcenter.

10. Produce a document which reviews existing and potential telecommunication links and protocols, concluding with final recommendations for the optimal telecommunications for the Western Bibliographic Network.

Telecommunications and Message Processing for Library Networking was published July, 1976. The main recommendation is that the West should participate in design and development of a national library communications system rather than duplicate work being done by other groups or build a system that would not fit neatly with systems in other regions. The telecommunications system of the future for libraries should be developed only on a national basis; individual regions or organizations can tackle their own needs on an interim basis, but eventually a system for the country as a whole is the only economical solution.

11. Produce a document which will summarize the investigations of the legal aspects of data base ownership, and which will recommend strategies for arranging record interchange and/or purchasing of records.

Other than advising western librarians to be sure they retain ownership of records produced for them by a utility or commercial vendor, we have not directly addressed this product. The subject of legal aspects is not a burning issue at the moment in the region, particularly as there are no immediate prospects for record interchange. Currently, records are purchased from vendors or the utilities on terms that appear to be satisfactory to the parties involved.

12. Produce a written charter for a Western Network which includes interim membership contracts.

The current charter for the Western Council (the members of WILCO) is included in this report as Appendix H. The charter will probably be updated in the current fiscal year to reflect the establishment, purpose, and structure of WILCO. The charter itself serves as the membership contract.

13. Produce a document recommending strategies on selected input of location records from the three bibliographic centers into the two machine-readable data bases.

The PNBC Board of Directors intends to hire a system analyst to investigate this question for that service center. In the meantime, discussions between PNBC and WLN directors are taking place to explore the future relationship between the two organizations. The BCR Director has submitted a proposal to a federal agency for converting a part of that service center's union file to machine-readable form via OCLC. A strategy for the California State Library Union Catalog is expected to be addressed by CLASS when that service center begins operation next year.

14. Report on the efforts to exchange bibliographic records with other networks.

Other than WLN's participation in COMARC, no exchange of records is contemplated for the near future by the western utilities. Both BALLOTS and WLN directors accord connection to the LC files as their top priority for tapping another data source.

15. Produce specific training packages to prepare various levels of users of the Network.

This "product" has not been accomplished because utilities and service centers have not requested WILCO assistance in this area to date, and because WILCO itself is not an operating agency. However, as part of the WILCO continuing education program (see Appendix F) for the coming year, a clearinghouse and information exchange will be initiated and will include training packages for specific networking services. In addition, WILCO has the task set for it in Library Networking in the West to develop continuing education programs for trustees, funders, and librarians on the costs and benefits of networking, and how libraries can make most effective use of networking capabilities.

16. Present in writing a final Network design document which will include technical, legal, organizational, financial, and operational details. (The financial aspects will be supplied from the USOE project.)

This "product" is embodied in a set of documents: (1) Library Networking in the West (Appendix G); (2) The Western Council Charter (Appendix H); (3) WILCO Continuing Education Plan of Action-1976/77 (Appendix F); (4) the WILCO brochure (Appendix I); and (5) the Program Plan and Budget for FY 77 (Appendix C). It must be noted that no "network" as such exists as a single, integrated, organization; thus, a comprehensive and specific design document connot be prepared. Furthermore, the status of development of a national library network at present is such that detailed long-range planning is difficult to perform because there are many questions concerning the role of LC, creation of a national library communications system, potential growth rates of the utilities, and the structure of data bases and services if users have access to LC files and service centers install minicomputers capable of maintaining state or regional union location files.

17. Negotiate formal Network membership contracts with participating states and/or institutions.

As of this date, there are nine WILCO members, the state library agencies of Alaska, Arizona, California, Idaho, Montana, Nevada, Oregon, South Dakota, and Washington. Colorado is joining. Other states and British Columbia that have participated in the project are being offered membership.

In sum, the Project has been marked by outcomes that are more significant in the political realm than in the technical area. As a research project, the major finding has been the need for an interstate coordinating organization with ties to the state library agencies and participation by librarians and staffs of networking organizations. Such an organization appears to be most workable if it exists apart from the operation of any services that border on the capabilities reserved to the utilities and service centers. These latter organizations are willing to cooperate with a coordinating organization that maintains an unbiased and non-threatening position that is clearly intended to foster mutual benefits for all parties concerned. We suggest that the WILCO model is appropriate for interstate coordination in other regions of the country as well as for the national library network. Furthermore, the questions we have identified affecting future evolution of library networking should be of help to other groups dealing with regional and national planning.

V. FINANCIAL REPORT SUMMARY

The detailed financial report is contained in Appendix L.

APPENDICES TABLE OF CONTENTS

A. Minutes of the Second Steering Committee Meeting, 17 July 1976

B. Minutes of the Western Council Meeting, 17 July 1976

C. WILCO Program Plan and Budget for FY77

D. Serials Survey Update

E. Telecommunications and Message Processing for Library Networking

F. Continuing Education Plan of Action 1976/77

G. Library Networking in the West: The Next Three Years

H. Western Council Charter

I. WILCO Brochure and Newsletters #3, #4

J. USOE Cost and Funding Study Reports

K. Economic Issues in the Networking of Library Technical Support Services

L. Financial Report (to be published at a later date)

M. Record of Distribution

APPENDIX A

MINUTES OF THE SECOND STEERING COMMITTEE MEETING

17 July 1976

WILCO

Western
Interstate
Library
Coordinating
Organization

MINUTES OF THE STEERING COMMITTEE
FOR THE GRANT ENTITLED
"A PROPOSAL FOR DESIGN AND DEVELOPMENT OF A WESTERN INTERSTATE BIBLIOGRAPHIC NETWORK"
(CLR 614)

Chicago, Illinois
July 17, 1976

August 5, 1976

Western Interstate Commission for Higher Education • P.O. Drawer P. Boulder, Colorado 80302 • (303) 492-7317

MINUTES OF THE STEERING COMMITTEE MEETING

Chicago, Illinois - July 17, 1976

The second meeting of the CLR-funded project Steering Committee was convened at the Palmer House at 9:00 a.m. By agreement with the Steering Committee Executive Board, the meeting was chaired by Kevin Bunnell of WICHE. Committee members present were:

Norman Alexander, Southern Oregon College
Kenneth Allen, University of Washington (represented part of the day by Gene Lewellyn)
H. Vincent Anderson, South Dakota State Librarian
Joanne Arnold, University of Colorado
Roger Hanson, University of Utah
Gerald Rudolph, University of Nebraska
H. Theodore Ryberg, University of Alaska
Roderick Swartz, Washington State Librarian
Margaret Warden, Montana State Senator
David Weber, Stanford University

WILCO staff attending were:

Maryann Brown, Senior Staff Associate
Eleanor Montague, Program Director
Karl Pearson, Technical Coordinator

A number of observers were present and joined in the discussions:

Page Ackerman, University of California at Los Angeles
Lura Currier, Pacific Northwest Bibliographic Center
Russell Davis, Utah State Librarian
Hank Epstein, BALLOTS
Donald Hendricks, TALON Regional Medical Library, Texas
James Kennedy, AMIGOS
Paul Lagueux, CLR
Marcia Lowell, Incoming Oregon State Librarian
Marion Maliczewski, University of Washington
H. Paul Schrank, OCLC
Alexi Shuman, Nebraska State Library Commission
Donald Simpson, Bibliographical Center for Research
Earle Thompson, University of Montana

Eleanor Montague reviewed the events of the project since the Steering Committee last met at the beginning of February 1976. Discussion with other groups, the Steering Committee Executive Board and the Western Council led, in April, to the establishment of the Western Interstate Library Coordinating Organization (WILCO) name and the decision to act as a coordinating rather than an operational network agency. WILCO continues the former Continuing Education and Library Resources Program at WICHE, and integrates continuing education, facilitation of resource sharing and research projects as appropriate for carrying out through the medium of a multistate agency. WILCO provides a forum and acts as a catalyst for multistate library cooperation in the West. The WILCO staff provides continuous support for resource sharing projects agreed upon by western librarians. In addition, the organization is a focus for representing western interests and concerns at the national level.

From April to the present, the staff has met monthly with the Executive Board and representatives from BALLOTS, WLN (Washington Library Network), OCLC, BCR (Bibliographical Center for Research) and PNBC (Pacific Northwest Bibliographic Center) to define how resource sharing can be fostered in the West. As a result of these meetings, a draft description of western networking goals and tasks for the next three years has been developed (Library Networking in the West: The Next Three Years).

In other activities for WILCO over the period, the completion of the staff development institutes (funded by a USOE training grant and conducted by Barbara Conroy) resulted in the compilation of a set of staff development models prepared by the 41 participants. The model book and final report will be distributed to the participants and their administrators, state libraries, USOE, and the Steering Committee.

Maryann Brown described the USOE-sponsored Cost and Funding Study to collect and analyze statistical data from 100 western libraries for operations likely to be affected by networking. Libraries were selected by means of a stratified random sample, with the strata consisting of large academic, large public, regional public, state, other academic, and other public libraries. Twelve of the libraries in the sample were invited to participate as case studies for a more intensive data collection effort to gather detailed processing statistics and unit costs. Data collection is about 75% complete. The final report will be published in September 1976. Other products resulting from the study will be: the data collection instruments and a user guide for self-administration; statistical analysis computer programs and user documentation; the sample design; a bibliography of research into technical processing costs; and a paper addressing funding, market structure, and pricing issues in networking. Libraries participating as case studies will receive their own data and analysis; the other libraries participating in the general survey will receive a report of the total survey results.

Eleanor Montague then briefly described a new research grant from USOE to design a statistical data base for use in library managers' planning. This project will provide a mechanism for compiling and maintaining data that are comparable among libraries from year to year. WILCO will draw upon the assistance of the National Center for Higher Education Management Systems (NCHEMS) staff in getting agreement on data element definitions and structuring of the data base. Staff will also work with the National Center for Educational Statistics (NCES) and various ALA committees concerned with library statistics. There will be a national advisory group for the project.

Margaret Warden asked if WILCO had long-term funding. Eleanor Montague answered that WILCO currently was funded by the Western Council, with additional grant and contract funds obtained to support special projects. Eleanor pointed out that it would be desirable to have WILCO funding established on a three-year planning basis.

Eleanor announced that Maryann Duggan, former Director of the Program, has moved to Idaho, where she is now the librarian for the Veterans Administration Hospital in Boise and is happily putting together a learning resources center there. Dr. Phillip Sirotkin has become the WICHE Executive Director. He is emphasizing the desirability of using the talents of the WICHE staff across program lines, and is mounting a campaign to publicize to state legislators and officials the benefits that their states derive through WICHE programs.

The document "WILCO Continuing Education Plan of Action - 1976/77" was then presented for discussion. Vince Anderson offered opening remarks on the draft. He stated that he liked the idea of WILCO brokering continuing education (CE) expertise and products because it would be too expensive for the smaller states to locate these resources themselves. These states need both basic and sophisticated materials. Eleanor Montague pointed out that coordination required a two-way effort, with states asking WILCO for CE materials that meet their special needs and with WILCO telling the states about good materials that are available.

Most of the states have appointed CE coordinators, many as a result of the WICHE-sponsored Institutes to Train the Trainers to Train. Eleanor Montague has opened discussions with Peggy O'Donnell of SWLA's CELS project and with CLENE in order that WILCO may supplement rather than duplicate work being done elsewhere. Various members of the Steering Committee pointed out the need for assisting states in setting priorities for CE programs. The WILCO budget has little money for purchasing or developing CE materials; instead, the staff will act as an "information exchange" for identifying what existing materials have proven effective. If development is needed, then WILCO might contract with interested states to do it, or subcontract with another organization that has the appropriate capability.

Marion Maliczewski pointed out that the CE program needs to be tied into other WILCO projects. For example, in the project to develop a statistical planning data base, data for budgeting and justification funding for CE should be included. This comment led to a discussion of WILCO resources available to support CE. The current budget allows only one professional position for CE, which is not sufficient to accomplish all the goals of the program. Thus, there will be a need to use the program goals as a model to be used in setting internal priorities so that the limited staff resources can be applied most effectively. The staff must also match its CE activities to the CE priorities set by the states. Vince Anderson argued that early proven successes for the WILCO CE program should lead to more liberal support from the states. James Kennedy and Donald Simpson pointed out that this could be a vicious circle because without sufficient funds to achieve the initial successes then the needed support would not be forthcoming.

Kevin Bunnell noted that not everything in the program could be achieved in the first year, and that it was important to use state capabilities as leverage in working towards the program goals.

David Weber then introduced discussion on the document Library Networking in the West: The Next Three Years. He pointed out that library costs are pressing ever higher, that 400-500 thousand items a year are published and that user demand for these items is increasing. The West is relatively poor in information resources, but large in area and natural resources. Population is very unevenly distributed. What are the tools for dealing with these problems? First, there are the state libraries that must supply leadership and dollars. Second, there are the bibliographic centers, who have a long tradition of multistate service to western libraries. Third, are the bibliographic utilities such as BALLOTS, OCLC and WLN. Fourth, are the resources contained in the West's libraries, even though these are so ill-distributed. WILCO can be the focus and catalyst of problem-solving efforts using all of these tools in a coordinated way. Collaboration through WILCO will help funding agencies recognize western library needs and intentions. The Library Networking document shows how western libraries can start to get to the higher plateau of library service that must be achieved in the next quarter century.

Hank Epstein pointed out that some of the goals and tasks in the document will take longer than three years to accomplish, and that there is a need to define clearly what can be achieved within the time frame. Paul Schrank stated that the OCLC governing board objected to that organization's being called a "utility." It was noted that the computer operations aspect of OCLC, WLN and BALLOTS should be distinguished from their organizational provisions for networking.

A number of suggestions for specific revisions to the document were made. These are being incorporated in the next draft of the document, to be distributed in August 1976. These minutes will cover the comments concerned with the underlying philosophy of the document rather than details of the revisions.

Gene Lewellyn raised a question about what WILCO might do to obtain funding for cooperative activities. One suggestion offered was to include CE programs aimed at informing library trustees about networking benefits and investment needs. WILCO should also assist the State Librarians in explaining networking to their state boards and commissions, and in planning and setting priorities for state-based resource-sharing activities.

At this point, there was a general discussion concerning "who" WILCO represented, as among the Western Council, other western State Librarians, the staff at WICHE, and western libraries, bibliographic utilities, networks and service centers. The document is intended to express the collective opinion of the West concerning regional needs and objectives. WILCO itself certainly is not able to undertake all the tasks, nor can it, as an organization, be responsible for matters that are rightfully the province of the other networking components. There also tends to be confusion as to when "WILCO" means the Western Council, the staff, or other networking components, and when it is used as a collective term as representing the western library community as a whole. Although the discussion of this question was dropped at this point, it was addressed again at length at the end of the meeting.

Margaret Warden pointed out that the federal government might be urged to fund some of the expenses for setting up portions of a complete bibliographic network for the West and the nation as a whole. The program prepared for the White House Conference should address this need, and the Conference should be used to point out the benefits of networking to all citizens that would result from the expenditure of relatively small amounts of federal funds.

David Weber, in discussing how grant funding should be sought to support projects to improve library telecommunications and interconnect the bibliographic computer-based systems, raised several questions on how task priorities are to be set and how it is to be determined who is to do what, and when, in seeking funding. Will the utilities and service centers commit themselves to the tasks, and under what umbrella will they present their funding requests? Roderick Swartz and Hank Epstein answered these questions by stating their understanding that WILCO will coordinate the getting together of representatives from the utilities and service centers to prepare proposals. The agency designated to have prime responsibility for a project would be chosen by the participants, and would likely be different from project to project.

Norman Alexander and Theodore Ryberg commented that there needs to be a means for obtaining input from other parties in addition to the State Librarians in planning for networking, and that all parties concerned must have an appropriate voice in policy decisions. Eleanor Montague described suggestions presented at a June 1976 meeting of the Steering Committee Executive Board and representatives from BCR, OCLC, BALLOTS, WLN and PNBC. Two groups, one representing resource libraries and the other representing networking service agencies, might be added to the WILCO structure. Each group might be chartered to have policy-making authority in their own sphere of concern, in addition to advising the other group and the Western Council on matters of mutual concern. The Western Council would retain final responsibility for ratifying major policies established by the other groups.

As the Western Council was to meet the same evening to discuss the WILCO governance structure, the comments of the Steering Committee were most helpful and opportune. While the Committee completed their discussion of possible WILCO structures, representatives of the utilities and service centers met, together with Henriette Avram of LC, Ruth Tighe of NCLIS, and Ronald Miller of NELINET, to discuss priorities for interconnecting the utilities' computers and for reducing the costs of telecommunications between service centers and utilities. The results of those discussions are contained in a WILCO memorandum dated 28 July 1976, re: "Western Priorities for Library Telecommunications Development."

The adjournment of the Steering Committee meeting marked the end of that body's formal charter to assist the project staff and the Western Council under terms of the CLR grant to WICHE for developing a western bibliographic network. As their final official actions, members of the Committee will be asked to review and comment upon the next draft of Library Networking in the West ... and the draft of the final report to CLR.

The project staff would like to take this opportunity to express its appreciation for the Committee's assistance and expert advice and suggestions. We hope that Committee members will retain their interest in western library cooperation and favor us with their suggestions for improvement of the WILCO program. Special recognition must be accorded to Vince Anderson, Gerald Rudolph, Roderick Swartz, and David Weber of the Steering Committee Executive Board who so skillfully and diligently guided the development of WILCO as a unique, innovative, and viable organization for facilitating cooperation among the many agencies concerned in library resource sharing in the West and the nation as a whole.

(Minutes taken by Karl Pearson)
KMP:vo

APPENDIX B

MINUTES OF THE WESTERN COUNCIL MEETING

17 July 1976

Western
Interstate
Library
Coordinating
Organization

WILCO

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MINUTES OF THE WESTERN COUNCIL MEETING, 16 JULY 1976, CHICAGO, ILLINOIS

Helen Miller called the meeting to order at 7:15 p.m. Council members present were:

> Joseph Anderson, Nevada; Vince Anderson, South Dakota; Alma Jacobs, Montana; Marcia Lowell, Oregon; and Roderick Swartz, Washington.

WILCO staff present were:

> Eleanor Montague, Karl Pearson, and Maryann Brown.

Several observers attended:

> Wayne Johnson, Wyoming State Library; Kevin Bunnell, WICHE; Paul Lagueux, Council on Library Resources; Donn Martin, BALLOTS; and Donald Simpson, Bibliographical Center for Research.

Discussion began by considering the prospects for other western states joining the Western Council. New State Librarians will be taking office in two states within the next two months. Current WILCO programs should be of demonstrable value to Hawaii. The point was made that WILCO must really produce if there is to be an incentive for the other states to join.

Eleanor Montague described a workshop on the preservation and conservation of library materials that is to be presented in San Francisco and Denver in September. The workshop is an answer to a high interest shown in the West in the conservation of library materials. The workshop will be self-supporting. Vince Anderson moved that the staff be encouraged to develop the workshop for preservation of materials provided that it pays for itself through registrations. The motion was seconded by Joseph Anderson and was passed unanimously without discussion. Putting on the workshop will have minor impact on staff resources and will provide experience for the staff in setting up such continuing education projects and in developing more visibility for WILCO.

Kevin Bunnell was asked to summarize the meetings of the CLR grant Steering Committee and representatives from western utilities and service centers, which had taken place earlier the same day. The Committee reviewed the continuing education plan prepared by WILCO staff and recognized the need for a strong program, although members pointed out the constraints imposed by limited money and staff resources available to the program. The Committee spent most of the meeting in reviewing the document "Library Networking in the West: The Next Three Years." A number of revisions were suggested, but there were few substantive changes. A major point remaining to be settled is the governance structure for WILCO. Kevin noted the emergence of a behavioral commitment to regional resource sharing that reinforces the verbal commitments expressed earlier. The technical group representing utilities and service centers, in a meeting attended also by Henriette Avram of LC, Ruth Tighe of NCLIS, Ron Miller of NELINET, and Paul Schrank of OCLC, pointed out the necessity for allowing western components to have a say in national planning. The utilities indicated that a top priority for them was to obtain access to LC files on-line, and the service centers stated their need to install data concentrators to reduce communications charges.

Joseph Anderson asked if "Library Networking in the West" represented a mandate from the Steering Committee. Vince Anderson, who was a member of the Steering Committee's Executive Board and had helped develop that document, stated that it was not a mandate. All the tasks depend upon the voluntary performance of western networking components in carrying them out, but performance is obligatory if western libraries are to get the services they need. Vince commented that, during the morning meeting, participants were saying "WILCO can't do that." By the end of the afternoon, however, the participants were asking "Who's going to coordinate carrying out the tasks?" Thus, there was a proven need for an organization such as WILCO, but there must be policy-making input from all parties concerned.

Rod Swartz, who was also on the Steering Committee Executive Board, described the WILCO structure proposed at a meeting of utility and service center representatives at Palo Alto in June. That structure proposed two groups, with advisory and policy-making functions, to represent resource libraries and networking service agencies in WILCO. The Western Council would be responsible for overall direction, coordination, and ratification of major policy decisions. During the full Steering Committee meeting on this day, a second structure was proposed in which the Western Council and the other two groups would be co-equal, with an executive board drawn from all three for governing WILCO.

Vince Anderson pointed out that the problem is how much authority to give to the resource and services groups. State Librarians are responsible to the whole library constituency in a state, and this responsibility is reinforced by state and federal legislative and funding policies. The attendees of the Palo Alto meeting, recognizing this fact, had agreed that the Western Council must retain final authority and veto power, but that decision-making authority should be delegated to the other groups, within a defined scope of activity. The State Librarians must recognize the need to listen to what those groups say because they are the State Librarians' constituents.

Marcia Lowell saw some ambivalence between a strong coordinating role for State Librarians and their intent to share decision-making. Because State Librarians need help in selling plans for better library service to state legislatures, she saw the need for obtaining such help by sharing policy-making with other segments of the library community within a state.

Joseph and Vince Anderson pointed out that state funds, once awarded, must be expended as designated. Therefore, State Librarians must have the final say in policy matters to ensure that this responsibility can be carried out. Thus, an executive board for WILCO could not be empowered to make decisions that conflicted with the responsibilities of the State Librarians.

Helen Miller designated Saturday, 21 August 1976, at the PNLA convention, as the next meeting for the Western Council. Vince Anderson and Marcia Lowell will present two approaches to a governance structure for WILCO.

Kevin Bunnell pointed out that power follows resources. While the State Librarians provide the money for WILCO, other segments of the library community also contribute resources in the form of library materials and technological and other expertise.

Vince Anderson pointed out that the Western Council is not just a group of State Librarians dealing with interstate cooperation. Both the continuing education program and the networking program show delegation of decision-making to other people. Perhaps the Western Council should be kept separate from WILCO to retain its capability to initiate action on good ideas and then withdraw in favor of letting the groups concerned in carrying out those ideas take over.

Joseph Anderson agreed, and hoped that Western Council members and potential members would be prepared at the 21 August meeting to respond to and decide upon the role of the Western Council and a WILCO governance structure. He also pointed out the need to brief western governors about multistate library cooperation activities and to begin laying the groundwork to create an interstate compact to support the western library program.

Eleanor Montague stated that, in preparation for the 21 August meeting, staff would distribute a new draft of the Networking document, a paper describing top priority tasks in the telecommunications area, a revised draft of the Telecommunications paper, and minutes from the meeting of networking policy-making representatives at the Library of Congress to be held on 9 August. Maryann Brown reviewed the status and expected products from the USOE-sponsored cost and funding study. Eleanor briefly described potential new projects in the areas of service to Indians, community development activities of community colleges, and services for the handicapped. These would draw upon the strengths found in other WICHE programs. As one example, the Student Intern program of WICHE has provided WILCO with an intern for 12 weeks to assist with the Cost and Funding study. The intern has degrees in both librarianship and economics, and is working on a doctorate in economics. Student interns are available to perform 12 or 24 week projects anywhere in the WICHE region, and librarians might wish to take advantage of this WICHE capability.

Paul Lagueux was asked to comment upon the events of the day. Paul pointed out that the grant funded by CLR had originally been described in terms of a three year schedule. Although the schedule was changed to one year, most of the products were retained, and a number of them have been delivered. The change from the proposed western network to the current WILCO program, i.e., from an operational to a coordinating role, clearly has come about as a result of the study. However, the organizational structure is still evolving. Keeping in mind the political environments in the West, it would be desirable to see additional support from the utilities and the service centers for WILCO as an organization.

Eleanor Montague pointed out that WILCO success must be based on fostering the cooperative spirit among libraries and networking components through helping them to work on common causes. Communication among the components has been stimulated, but now specific tasks must be accomplished. The CLR grant has caused or stimulated developments in library cooperation that would not have taken place otherwise, particularly in regard to examining the roles and relationships of organizations in interstate networking. Vince Anderson pointed out that PNBC and BCR are undergoing intensive self-study, at least partially as a result of the CLR grant. He also observed changes in BALLOTS, WLN and OCLC that may have been stimulated by grant-funded activities.

Paul Lagueux briefly described other CLR grants for support of library networking made to the University of Chicago, BALLOTS, OCLC, and WLN. CLR is supporting the meetings of network policy-makers at LC and working groups on bibliographic control, use of the ISBN by libraries, and bar-coding schemes for marking books and periodicals. As Paul pointed out, in referring to the tremendous efforts needed to develop a true national library network: "How do you eat an elephant? One bite at a time."

The meeting was adjourned at 9:10 p.m.

Distribution: Western Council
WILCO Staff

(Minutes taken by Karl Pearson)

APPENDIX C

WILCO PROGRAM PLAN AND BUDGET FOR FY 77

2) To recommend interstate resource sharing policies that would reduce current costs or improve access to information.

3) To propose techniques to reduce or compensate for imbalances between net-lending and net-borrowing states and major institutions.

4) If warranted and recommended by western librarians, to establish a pilot program that would test and demonstrate activities for facilitating equitable interstate resource sharing on an on-going basis.

In performing the proposed project, we expect to work closely with many librarians in state agencies, regional organizations, and major institutions in collecting data and in employing analytical techniques that have use beyond the immediate bounds of the project. Therefore, two additional aims for the project are:

5) To assist state library agencies and other organizations, at their request, in using analytical techniques and data developed in the course of this project in furthering their own in-state and interstate resource sharing activities.

6) To refine some of the transmission load and routing design parameters and functional specifications currently being developed by the WILCO project for an improved telecommunications network for libraries that might be developed in the near future.

Six tasks will be undertaken:

1) Survey current ILL policies

2) Develop a descriptive model

3) Identify alternative policies

4) Analyze selected alternative policies

5) Develop recommendations

6) Set up a pilot program (if desirable)

This project, if funded, would enable the staff to (1) work with and assist state library agencies and other major institutions to improve interstate and inter-regional cooperation, (2) foster development of data bases with location information, (3) upgrade library staff ability to match patron needs with network capabilities, (4) develop some parameters and functional specifications for an interlibrary loan system, and (5) bring together a small technical advisory group to help determine requirements and act as liason with librarians and various ILL committees.

From CLR, $99,703 has been requested; $22,890 in matching funds would be required from WILCO. The grant as submitted would support 1.4 exempt FTE (.4 FTE WILCO Project Director and 1.0 Technical Coordinator/Cost Analyst), 0.5 FTE Research Assistant, and 1.0 non-exempt staff members.

WILCO

PROGRAM PLAN AND BUDGET FOR FY77

I. INTRODUCTION

At the April 8-9 joint Western Council and CLR project Executive Board meetings, the general structure and budget for the FY77 WICHE Library Program was discussed and outlined. The purpose of this memo is to present, in detail, the program plan and budget for FY77. The plan reflects the recommendations of the Western Council and the CLR project Executive Board for the continuation of the work begun under the current Council on Library Resources grant.

II. PROGRAM -- BACKGROUND

(NOTE: See Attachment A for the exact motions as passed at the April 8-9 meetings.)

The Western Council moved to:

1) support continuing education that was responsive, but not limited, to networking, resource sharing and library systems.

2) support a "catalytic" forum to facilitate, coordinate, and foster cooperation in resource sharing in the region; provide a clearinghouse for information and consulting services; and work on projects of special need for the region.

3) change the name of the program to WILCO (Western Interstate Library Coordinating Organization), a name designed to reflect the nature of the WICHE program.

4) accept, if offered, funding for the two grant proposals [1/] (one from CLR and one from USOE) and incorporate the grant tasks into the WILCO program.

III. THE CLR PROPOSAL

The new one-year proposal submitted to CLR in April 1976 has the following specific aims:

1) To investigate the technical, economic, social and political consequences of current and alternative policies for interstate library resource sharing.

[1/] The request to USOE is entitled "A Proposal to Develop and Demonstrate a Statistical Data Base System for Library and Network Planning and Evaluation." The request to CLR is entitled "A Proposal for Facilitating Equitable Interstate Sharing of Library Resources in the West." Two additional grants (not considered in this plan because of low probability of funding) have been submitted to USOE: "Training in Cost Analysis for Network Impacted Services" and "Assessing the Impact of On-Line Access to Location Data on Interlibrary Loan Patterns."

IV. THE USOE PROPOSAL

The new one-year proposal submitted to USOE in December 1975 has the following objectives:

1) To cooperatively design and develop a statistical data base system containing data elements essential in local, state and multi-state library and network planning and evaluation.

2) To demonstrate the use of this statistical data base system in academic, public and state libraries in participating states that are members of the WICHE Western Council.

3) To evaluate the applicability and cost effectiveness of the developed library statistical data base system at the loca, state, multi-state and national levels.

4) To disseminate the components of the new statistical data base system at the national level thereby making it available for use by other state, groups of states, or national agencies.

The overall goal of the proposal is to enhance decisions regarding optimal allocation to various programs, functions and activities of those limited resources (materials, personnel, space and dollars) available to libraries.

The results expected include:

1) A list - with definitions - of statistical data elements critical to state and multi-state library and network planning and compatible with LIBGIS and other NCES activities.

2) A "data structure" or file arrangement permitting data analysis (and statistical correlation) and compatible with proven and acceptable data base file structures (such as NCHEMS).

3) A demonstration of the usefulness of the statistical data base system in both public and academic libraries in several western states by actually collecting data and providing outputs.

4) A series of input/output resources allocation models illustrating the use of the statistical data base system for local, state and multi-state decision making.

5) A manual describing details of the system thereby enabling other libraries or states to implement all or part of the system.

6) A series of national publications about the system and packets of materials for training in the use of the system.

7) Oral and audiovisual presentation of the system and its applications at state, regional and national conferences.

8) An active advisory group of key organizations concerned with library statistics thereby catalyzing the design, implementation, and use of the proposed system at the national level.

The benefits expected are:

1) A systematic look at the need for library statistical data of various kinds and for various applications - resulting in a conceptual overview of a library statistical data base system.

2) A means for identifying those statistical data elements available through current efforts and major gaps in data presently available - yet necessary for a useful statistical data base system.

3) An incremental improvement in national library statistical data collection activities resulting in better data and avoiding redundancy and repetitive data collection efforts.

4) A capability for improving library decision making, particularly regarding allocation of resources based on quantitative inputs.

To fund the work described above, $59,000 has been requested from USOE; $14,776 is required in matching funds. The grant would require (and support) 1.05 exempt FTE (1.0 Cost Analyst and .05 WILCO Project Director), 0.5 FTE Research Assistant, and 0.3 non-exempt secretarial support.

V. THE WILCO CORE PROGRAM

The WICHE WILCO program is intended to be an active, highly motivated, integrated program to:

1) coordinate Continuing Education activities in member states,

2) provide a clearinghouse for Continuing Education information and broker Continuing Education packages,

3) provide a forum for and clearinghouse on resource sharing, and

4) undertake research projects and consulting to meet the needs of the western states, bibliographic centers, networks and systems.

As such, WILCO will represent a unique organization, operating throughout the West to provide on one hand continuing education and the other to act as a catalyst to enhance interstate interlibrary cooperation and sharing. The following description of program activities and budget calculations assumes that both the new CLR grant and the USOE Statistical Data Base grant will be received by WILCO.

A. Continuing Education Program Activities

During FY77 the WILCO Core Program will redirect the continuing education effort primarily to those training activities supportive of networking, resource sharing, and library system, and interlibrary cooperation. However, customized continuing education activities in other areas can be developed or contracted by states so desiring. Training materials (such as ACCESS Tapes) are being collected by staff for use by the states. A formal exchange of existing training materials among states will be implemented (under the name WESTEX). Membership in CLENE will assure access to training materials developed nationally. WILCO staff will be available to assist each member state in developing both short- and long-term continuing education programs at the state level. On request, the WILCO staff will assist the bibliographical centers and networks develop or field training activities designed to enhance greater understanding and use of these resources and services throughout the West. The technical expertise of the staff in cost analysis, telecommunications, network design, data base development, etc. will be made available to each member state in the manner best suited to the needs of the state.

Approximately 0.9 FTE exempt staff will be available to work on these continuing education tasks (0.15 FTE WILCO Director and 0.75 FTE Continuing Education Coordinator/Analyst). Secretarial support staff of 0.7 FTE will be available to the continuing education activities.

B. RESOURCE SHARING COORDINATION (part of the CORE WILCO Program)

The objectives of the Resource Sharing coordinating activities include:

1. To provide a long-term, stable forum for cooperative interstate and interlibrary resource sharing and cooperative and coordinated planning and development.

    a. facilitate regional research and development programs to reduce redundant development and identify new areas of research.

    b. provide a formal communication link among the major components in order to exchange information and keep up to date on new research and development, special projects and specialized resources and expertise.

    c. help attract grants for on-going research and development for the region (a combination of grants for WILCO research and grants to be undertaken by others).

    d. disseminate findings to policy and funding decision makers.

    e. help (along with others in the West) to provide a voice for influencing national network planning.

2. To provide access to objective consulting sources and expertise in the region.

    a. identify specialized expertise in the region; facilitate access to this expertise.

    b. maintain staff expertise in new technologies, systems and cost analysis; make staff available to WILCO members in the West; make staff available for special analytical projects (some of this latter activity might be done under contract).

    c. gather specialized information, upon request, for WILCO members; disseminate information to others.

3. Provide an objective clearinghouse for information.

    a. actively maintain information on available systems and services and their use, cost, availability, etc.

    b. maintain files on new hardware, technologies and communication systems.

    c. make information available to WILCO members.

    d. provide a focal point for needs expressed in the region.

    e. maintain information on cost analysis techniques, studies and planning data.

4. Help plan cooperative resource sharing and material delivery programs.

a. provide an established mechanism to address problems of and propose solutions for improving resource sharing, including:

- standardize ILL policies
- system for recompense for net lenders
- cooperative collection development
- material delivery
- access to bibliographic location information

5. Facilitate technical "interconnection" of autonomous existing bibliographic systems.

a. actively work with the major bibliographic sytems to promote coordinated development, "record interchange," terminal interchangeability, common communications protocols.

b. promote system compatability in light of planned developments at the Library of Congress.

c. provide a focal point for communicating user needs to system operators.

d. provide a focal point for planning orderly use of new technologies.

6. Study existing components and undertake needed research projects.

a. study existing components in the West and propose a methodology for meshing the activities that could result in a reasonable, cost-beneficial, effective multi-state system with a broad range of activities.

b. work out a cost-beneficial strategy for building a regional machine-readable data base; determine the most effective and cost-justifiable mix of access to the data (on-line, fiche, etc.).

c. identify communications requirements and current services.

d. provide a forum to discuss the requirements of mini-computer networks for library processing and to standardize communication interfaces, especially in light of emerging distributed mini-computer networks.

e. identify computer capabilities and data bases available in the West; provide a focal point to identify ways of extending these capabilities to libraries in the West.

If both grants are funded, approximately 0.65 FTE exempt staff will be available to work on these CORE tasks (0.4 FTE WILCO Director and 0.25 FTE CE coordinator/analyst.)

VI. SUMMARY

As you can see, the bulk of FY77 WILCO activities will revolve around the development, testing and evolution of the statistical data base system for planning and resource allocation and the coordination and planning of new, efficient and effective resource sharing policies. The FTE for core activities is minimal but the FTE that is available will aggressively pursue the tasks listed above under the WILCO CORE Program description.

VII. WILCO BUDGET FOR FY 1977

To carry out the program for FY77, WILCO will require matching funds for the USOE and CLR grants and funds for a small core staff (see figure 1 for the WILCO personnel allocation chart). For the Core FTE, travel funds will be needed that are sufficient to ensure that each professional staff member is able to visit each participating state at least once during the year; in-person meetings are an absolute necessity for establishing contacts to provide effective information exchange and other coordinating activities. Funds must be sufficient to support frequent communication between staff and western librarians by means of telephone and teletype, correspondence, and publications such as special reports and the newsletter. A clearinghouse for continuing education and resource sharing materials (WESTEX) will be maintained as a part of the CORE WILCO Program, and funds are required for the purchase of training materials.

Please note that the core budget also includes funds for the travel of Western Council members to three meetings at a central point during the year.

The FY77 composite budget is represented in figure 2. The budget assumes that WILCO will receive both the USOE and CLR grants. Figure 3 is the proposed FY 77 membership fee by state. The Core program and the amount needed from the supporting states, has been pared to the minimum. To reduce it further, the CE position would have to be removed or reduced to a seriously low and possibly ineffectual level. Since continuing education has been cited frequently as a fundamental and vital part of the WILCO program, to lose it at this point would be regrettable.

FIGURE 1: WILCO PERSONNEL ALLOCATION BY FUNCTION AND GRANT.

				CORE		
PERSONNEL	NAME	USOE GRANT	CLR GRANT	CONTINUING EDUCATION	RESOURCE SHARING COORDINATION	TOTAL
1. WILCO Director and grants principal investigator	EAM	0.05	0.4	0.15	0.4	1.0
2. Technical Coordinator/Cost Analyst	KMP	0.0	1.0	0.0		1.0
3. CE Coordinator/Analyst	N/A	0.0	0.0	0.75	0.25	1.0
4. Secretarial support	N/A	0.3	1.0	0.7		2.0
5. Cost Analyst	N/A	1.0	0.0	0.0		1.0
6. Research Assistant	AM	0.5	0.5	0.0		1.0
TOTAL (exempt)		1.05	1.4	1.55		4.0
TOTAL (ALL)		1.85	2.9	2.25		7.0

WILCO COMPOSITE BUDGET - FY77
(as of 6/1/76)

ITEM	USOE STATISTICAL DATA BASE			CORE	TOTAL GRANT & CORE	FUNDING NEEDED FROM STATES
	USOE	MATCHING	TOTAL			
01 - Salaries - Exempt	26,690	0	26,690	50,987	79,826	50,987
02 - Salaries - Non-Exempt	2,149	0	2,149			
04 - Contract Hourly	0	200	200	435	635	635
05 - Vacation		2,491	2,491	4,297	6,788	6,788
07 - Benefits	4,038		4,038	7,137	11,175	7,137
26 - Intern Stipend	0	0	0	0	0	0
27 - Consultant	(1) 3,900	0	3,900	2,000	5,900	2,000
28 - Sub-contracts	0	0	0	0	0	0
29 - Data Processing	2,675	2,000	4,675	1,370	6,045	3,370
30 - Travel - Staff	2,400	1,500	3,900	5,650	9,550	7,150
31 - Travel - Relocate	0	0	0	1,800	1,800	1,800
32 - Travel - Consultant	(1) 6,720	0	6,720	2,462	9,182	2,462
33 - Travel - Other	0	0	0	(6) 9,000	9,000	9,000
34 - Travel - Trainee	0	0	0	0	0	0
45 - Publications	0	1,000	1,000	750	1,750	1,750
53 - Office Rent	0	3,047	3,047	1,625	4,672	4,672
54 - Telephone Equipment 55 - Telephone Toll	1,410	450	1,860	2,950	4,810	3,400
58 - Postage	0	500	500	670	1,170	1,170
60 - Meeting Expense	0	315	315	(7) 1,010	1,325	1,325
61 - Office Supplies	0	500	500	625	1,125	1,125
64 - Copying	0	1,500	1,500	2,900	4,400	4,400
65 - Other Expense	0	0	0	(4) 4,200	4,200	4,200
66 - Training Materials	0	0	0	(5) 4,000	4,000	4,000
77 - Equipment Purchases	0	0	0	0	0	0
TOTAL DIRECT COSTS	49,982	13,503	63,485	103,868	167,353	117,371
99 - Indirect Costs	(2) 9,018	(3) 4,225	13,243	27,110	40,353	31,335
GRAND TOTAL	59,000	17,728	76,728	130,978	207,706	148,706

(1) Consultants, advisory board and evaluator
(2) 27.43% of salaries and fringe benefits
(3) Difference in indirect (41% - 27.43%)
(4) CLENE Membership and WESTEX
(5) CE materials
(6) Western Council travel
(7) Western Council meeting expenses

FIGURE 3: PROPOSED FY77 MEMBERSHIP FEE BY STATE

STATE	PROPOSED FY77 MEMBERSHIP FEE (1)
Alaska	$10,041
Arizona	21,041
California	22,444
Idaho	13,115
Montana	12,976
Nevada	11,437
Oregon	22,444
South Dakota	12,794
Washington	22,444
TOTAL for current members	$148,706

(1) The new FY77 membership fee represents a 49.6% increase over current membership for the integrated program described in this plan, assuming no members are gained or lost. (Hopefully, new members will join the program.) However, should the membership change, expenditures and income budgets would have to be reexamined by staff and the Western Council.

WILCO

PROGRAM PLAN FOR FY77

ATTACHMENT A

WESTERN COUNCIL MOTIONS

Motion 1: Moved "that the Western Council move (in networking) toward Alternative No. 2, with the addition of Item 3 under Alternative No. 3, Items 1A, 2B and 2C under Alternative No. 4, and that Continuing Education Alternative No. 2 be incorporated, and that this be structured under anything but a 'network.'"

Moved by Rod Swartz.

Seconded by Ethel Crockett.

AMENDED: Both Mr. Swartz and Mrs. Crockett agreed to strike the portion of the motion dealing with "network" terminology.

AMENDED: Both parties agreed to amend the motion to exclude the Continuing Education portion of the motion and to consider this separately.

VOTE: Voice vote carried. Note: this motion refers to pages 13 and 14 of the working paper entitled "Western Interstate Cooperative Bibliographic Network Alternative for Action."

Motion 2: Moved "that the Western Continuing Education for Library Personnel Program be supportive of networking, resource sharing, and library systems."

Moved by Eloise Ebert.

Seconded by Helen Miller.

(Please note that this differs from Alternative No. 2 as outlined in the CE Working Paper in that it purposely omits the words "concentrate only" on networking, resource sharing.... The purpose intended, it was stated, was to leave CE as an "open-ended" program for all levels of library personnel as needed by the Western Council.)

VOTE: Yes 3; No 2; Abstention 2. However, the 2 abstentions changed their vote after discussion to Yes - making the final vote 5 yes and 2 no.

Motion 3: Moved "that the staff prepare for the Western Council a budget reflecting the discussion of this afternoon and present that budget to the Western Council some time within the next two months at a meeting to be held by the Western Council, funded out of Surplus in Core budget."

WESTERN COUNCIL MOTIONS (cont.)

Moved by Vince Anderson.

Seconded by Rod Swartz.

Motion withdrawn.

Motion 4: Moved "that the CLR grant be accepted if offered, subject to staff's approval of any negotiations necessary to obtain it."

Moved by Helen Miller.

Seconded by Ethel Crockett.

VOTE: Passed unanimously by those present - 6 members.

CLR PROJECT EXECUTIVE BOARD MOTIONS

Motion 1: Moved that "the Executive Board urges that the future direction of the WICHE Library Resources Program take the form of providing a coordinating role among the existing regional networking components, rather than recommending the creation of any additional super or overlaying operating structure. In furtherance of this objective, the Executive Board recommends to the Western Council that it provide a region-wide forum for planning and cooperation, promote resource sharing, pursue new research and development, provide consulting expertise, conduct cost studies, help states identify needs and plan intrastate network activity, act as a clearinghouse for information, etc."

Moved by David Weber.

Seconded by Vince Anderson.

VOTE: Uananimous.

Motion 2: Moved that "it is the sense of the Executive Board that this coordinating activity should include the points in Motion 1 of the Western Council, made on April 8, 1976, as a guide for the next few years."

Moved by Gerry Rudolph.

Seconded by Vince Anderson.

VOTE: Unanimous.

CLR PROJECT EXECUTIVE BOARD MOTIONS (cont.)

Motion 3: Moved that "it is the recommendation of the Executive Board that this coordinating activity continue to be headquartered at WICHE, and that it be renamed _________ (left blank pending later discussions).

Moved by David Weber.

Seconded by Vince Anderson.

VOTE: Unanimous.

Motion 4: Moved that "the Executive Board recommends to the Project Director that current CLR grant "products" Nos. 5, 7 (partially), 8, 9, 10, 11, 13, 14 and 15 be accomplished in close collaboration with appropriate representatives of the three bibliographic centers and the three predominant utilities or bibliographic systems through a series of meetings, to be scheduled by the May 4 Executive Board meeting."

Moved by David Weber.

Seconded by Vince Anderson.

VOTE: Unanimous.

Motion 5: Moved that "it is the Executive Board's recommendation to the Western Council that a further definition of each CLR grant 'product' be prepared, with requisite budget adjustments, for Western Council approval and renegotiation with CLR."

Moved by David Weber.

Seconded by Gerry Rudolph.

VOTE: Unanimous.

APPENDIX D

SERIALS SURVEY UPDATE

WILCO

Western
Interstate
Library
Coordinating
Organization

N-16/000/02
Karl M. Pearson, Jr., Comp.
30 September 1976

SURVEY OF UNION SERIALS DATA BASES IN THE WEST

INTRODUCTION

In February and June, 1976, WILCO conducted a survey of organizations in the West or close by that maintain a union serials data base. The original purpose of the survey was to identify data bases that would make a suitable starting point for creating a union list of serials for the State of Montana. The subsequent survey was made to complete the inventory of western serials data bases.

Ten organizations maintaining a serials data base have been identified:

University of Denver
California State Library: California Union List of Periodicals (CULP)
Portland State University: Oregon Regional Union List of Serials (ORULS)
Washington Library Network (starting with the serials list of the University of Washington)
East Washington State College: Spokane Area Combined List
University of Minnesota: Minnesota Union List of Serials (MULS)
Stanford University
University of California: UC Union List of Serials (UCULS)
California State University and Colleges
University of Nevada: Intermountain Union List of Serials (IMULS) (includes Nevada and Arizona)

In addition, the States of Montana and North Dakota also maintain union lists through contract with MINITEX (producer of the Minnesota Union List of Serials). The State of Idaho has a union list, last updated in 1972, for three academic and several major public libraries.

WILCO wishes to take this opportunity to thank the librarians responding to the survey. Each of them invested a great amount of effort in answering all questions most completely and in furnishing additional descriptive material. This is very concrete evidence for the strength of the cooperative spirit in the West.

Western Interstate Commission for Higher Education • P.O. Drawer P. Boulder, Colorado 80302 • (303) 492-731

UNIVERSITY OF DENVER (DU)

Under the leadership of Ward Shaw, Associate Library Director, DU recently created a union list of serials and associated data base for four Colorado universities, the Denver Public Library, and a medical library. Since the major objective of the project was to produce a finding tool as rapidly as possible, no time was spent on developing complete and authorative records. The resulting product is a simple title-holdings statement list that fulfills the basic requirement. The file structure is non-MARC. The character set is limited to uppercase.

The Idaho Union List of Serials is similar to the DU list.

CALIFORNIA UNION LIST OF PERIODICALS (CULP)

The California State Library staff, under the direction of Gerald Newton, Chief Technical Services Bureau, produces this union list which includes many public and community college libraries throughout the state, as well as special libraries in the northern California region. Records for main entries do not include abbreviated titles, publisher, LCCN, or language, but ISSNs are entered. Publication place is indicated when necessary to distinguish between similar titles. Cross references are being added for variant titles. Data in the file have been verified against standard sources, and it is estimated that 90% of the entries are accurate. Filing rules are programmed, and are thus simpler than LC filing rules for dictionary catalogs. The file structure is MARC(S), with and upper and lower case character set, but without diacritics. Half of the entries have been verified against NUC, NST, etc. About 10% of the entries are known to be inaccurate, mainly because they are misidentified or are entered under the wrong title.

CULP is being expanded to cover more junior college and public libraries and to include special libraries in southern California. New editions are being published on microfiche twice a year. The State Library is willing to provide modest assistance to libraries in other states in developing their own union lists.

OREGON UNION LIST OF SERIALS (ORULS)

Daphne Hoffman has been in charge of producing this union list representing many of the academic and junior college libraries in the State of Oregon, together with several special libraries and the Library Association of Portland (the city's public library). Main entries are relatively complete except for publisher, language and (unfortunately, perhaps, for a capability for linking to CONSER records) LC card number (LCCN) or International Standard Serials Number (ISSN). Cross-references are included to link current titles with earlier or different versions of the titles. Data in the file have been verified against NUC, NST, etc., and entries are considered to be authoritative. Entries are filed according to a numeric code that is manually assigned. The file structure is non-MARC, and only uppercase characters are used.

The ORULS project will cease operation after June 1976, and no firm plans have been made regarding any continuation or a disposition for the data base. Staff had hoped that a follow-on project might provide for merging ORULS with the WLN data base, or at least for adding LCCNs and ISSNs.

WASHINGTON LIBRARY NETWORK (WLN)

The Washington Library Network's new on-line system is scheduled to be operational with serials records in the Summer of 1976. Initially, serials records are expected to come from two sources: the University of Washington, and MARC and CONSER records distributed by LC. The existing UW serials data base has brief records; during the conversion and loading of these records into the WLN data base, UW staff are expanding the records somewhat to include more data elements. In the Fall of 1976, ten other Washington libraries (mostly public) are expected to begin adding their serials holdings. Authority control for names and subjects is a feature of the WLN system, and will be applied to serials as well as monographic records.

The WLN file structure and data character set is full MARC. The Rather filing rules are programmed to cause entries to appear in approximately the same locations as provided by the LC filing rules for dictionary catalogs. Records entered in the WLN data base will be highly authoritative and in conformance with LC standards. Separate working files, as accessible to users as the main data base, will be established for records that have not been validated for inclusion in the main data base.

Although WLN has not yet produced a serials list, it has published a printed union catalog of monographic holdings for several Washington libraries over the past few years. COM capabilities are available at the state Data Processing Service Center. For further information, contact Mary Jane Pobst Reed, Associate State Librarian for Research and Planning (Automation), Washington State Library.

SPOKANE AREA COMBINED LIST - EAST WASHINGTON STATE COLLEGE (EWSC)

Charles H. Baumann, College Librarian, and Joan Tracy, Assistant Librarian for Technical Services, have developed a sophisticated system to produce a union list for all types of libraries in the Spokane area and the Tacoma Public. Main entries are relatively complete except for publisher and place of publication. There is some categorization by 30 general subject areas, but subject headings are not included. LCCNs and ISSNs are included, and all variant titles are cross-referenced. Data have been verified against NUC and NST, and are considered to be authoritative and of high quality. Entries are filed in accordance with LC rules by means of a manually-assigned numeric code. The file structure is non-MARC, and only uppercase characters are used.

To date, the list has been produced and distributed by the Spokane Public Library in printed form. While a microfiche form has not been tried yet, EWSC feels that a local service bureau would be able to do that work. Baumann has expressed interest in assisting other libraries in using the Spokane area list and the EWSC system to develop their own union lists.

MINNESOTA UNION LIST OF SERIALS (MULS)

As a base for the CONSER project, developed under the direction of Alice E. Wilcox, Director of MINITEX and Lois N. Upham, Data Base Manager, MULS is perhaps the best-known serials data base. Its coverage is extensive, both in terms of the number of serials titles included and in the number and types of libraries whose holdings are represented. Records are structured in a MARC(S) form with minor variance, and entries are more complete than in the other data bases surveyed. Both LCCNs and ISSNs are included, and variant titles are cross-referenced. Data have been verified against NUC, NST, LC Depository Catalog and other sources, and are considered to be highly authoritative. Entries are filed by computer algorithm, leading to occasional misfilings which are being corrected as found, and there are some variances from traditional filing rules (although these variances tend to lead to a more simplified filing structure). Holdings statements appear to be more extensive and readable than in other lists. A full MARC character set including diacritics is used.

North Dakota contracts with Minnesota to produce that state's union list: To date, this has been a satisfactory arrangement, and North Dakota holdings are being included in the next published edition of MULS (scheduled for April), which will be produced on microfiche. The MULS staff will create new records as needed from title pages for journals and submitted by participating libraries, thus maintaining a high degree of control over the quality of the data base.

Union serials lists for the States of Montana (ULMS) and North Dakota are based on MULS and are produced under contract with MINITEX.

INTERMOUNTAIN UNION LIST OF SERIALS (IMULS)

Nevada has created a union list of serials data base, and Arizona has accepted an invitation to join Nevada in creating a multistate data base. Robert G. Anderl, Assistant Library Director for Technical Services, University of Nevada at Las Vegas, is responsible for the technical details, and Robert Kemper, Director of Library Services, Northern Arizona University, Flagstaff, is responsible for the content of the list. The data base is very extensive in terms of the number and variety of libraries whose holdings are reflected. For a high percentage of the records, data have been verified against NUC and NST, and additional verification and correction is expected as the data base is maintained. Filing rules are not programmed, and are being changed to sort letter by letter rather than word by word. The character set is upper case only; the file structure is non-MARC, but records are variable length.

The data base is available for use by other libraries. The file maintenance software may be available, depending upon the policy of the University computer center. The IMULS staff are willing to produce lists for other libraries for only the cost of staff time and materials; there is no charge for computer time. As a byproduct of the IMULS system, special subset lists are produced for three type-of-library groups.

UNIVERSITY OF CALIFORNIA UNION LIST OF SERIALS (UCULS)

UCULS was created in 1975 and early 1976 by combining serials files from all nine UC campuses. The project was managed by the University-wide Library Automation Program (ULAP); Frederick M. Venzie III is manager for the UCULS project. The majority of the UCULS records contain data in the MARC(S) fields of 008, 035 (local system number), 110, 245 and 850 (holdings). The 008 field is usually incomplete. The data base was created both to publish an immediately useful product and to be the input for UC's participation in the CONSER Project. By January 1978, the current data base should attain permanent status, with maintenance and updating including information received via CONSER. Over the next 5 years, the quality of the data base will be upgraded as more records are authenticated or are replaced with LC-supplied data.

A unique feature of UCULS is its publication as a keyword index so users can access the list through any key word appearing in the title or author of a serial. UCULS is available for purchase, both as a microfiche list and as a data base. The software is available, but a considerable amount of work would be required to adapt it to run on another institution's computer. The update and maintenance software, currently in design, will have the ability to process other library serial files when these files are in LC-defined MARC format. This software will not begin to be available for processing and/or demonstration until early 1978.

SUMMARY

Major points on which the serials data bases can be compared are listed on the attached chart. The first line lists the number of serials titles (exclusive of cross-references) in each of eight data bases. The next rows list the number and types of libraries included in each data base. For CULP, no breakdown of special libraries by type is available. For MULS, the list of libraries and special collections (many of which are a part of the University of Minnesota) has been interpreted somewhat arbitrarily to develop the figures shown, which are only estimates.

The next row indicates whether or not titles are cross-referenced with their variants. No attempt has been made to estimate how inclusive these cross-references are to each data base. For some data bases, the computer is programmed to cause entries to be filed in the appropriate place on the union list; for the other data bases, proper filing positions are designated by assigning a number to an entry that will cause it to appear at the location desired. Computer filing rules are advantageous in that they do not allow inadvertent misfilings. However, they are much simpler than the LC filing rules for dictionary catalogs and are subject to implementations that overlook certain peculiarities appearing in text. For example, initialisms may be written in several ways, such as A.C.M, A. C. M., or ACM; unless a standard form is programmed for purposes of computer sorting, entries with variant forms may be scattered in the listing.

The richness of the record structure used in each data base and its "goodness of fit" to the MARC(S) format is suggested in the next row. In general, CULP, WLN and MULS come close to the MARC(S) standard, suggesting that a relatively costly conversion process would be necessary to merge the other data bases into a regional or national union serials file.

SUMMARY (continued)

The next set of rows indicates what data elements are included in the serials records. Without an LCCN or ISSN, a title cannot be matched easily to serials records from CONSER or other sources. No national standard has been established for identifying libraries; the existing NUC codes are established mainly for large academic and public libraries, and do not include the smaller libraries. It might be desirable to establish identity codes for libraries that designated their state and locality as well as providing for branches and special collection locations. The "modified NUC" entries indicate that the state designator has been deleted; "local" codes usually are abbreviations for libraries' names.

The assessment of the authoritativeness of their data base was made by each survey respondent. All the data bases except for EWSC and DU are being maintained on IBM equipment, which may indicate that no computer-related constraints would hinder a possible merger or transfer of those data bases. Only the MULS and (when available) WLN data bases use the full MARC character set. CULP has both upper and lower case characters, but the remaining data bases are limited to upper case only. Only the ORULS and CULP data bases have been output on microfiche via a COM photocomposition device to date, although the next MULS edition will be produced by this technique. As with bookform catalogs, the cost of producing and distributing printed union lists is far higher than for microform versions.

The structure and content of holdings statements in the various data bases is suggested in the next row. "Brief" indicates that statements are short (possibly a bit on the cryptic side) and do not include call numbers. "Structured" indicates that the content of holdings statements is specifically defined; "highly structured" indicates that specific subfields are defined for portions of a holdings statement.

DATA BASE	DU	CULP	ORULS	WLN-UW	EWSC	MULS	IMULS		UCULS
SERIALS TITLES	?	70,000	45,000 by Jul 76	50,000 by August 76	7,231	77,785	18,000 (current) 40,000 (near future)		243,000
LIBRARIES REPRESENTED IN DATA BASE:				MARC records, too			58 Nevada	58 Arizona	
Research	4	0	3	1	0	1	2	3	9
Academic	0	0	24	1	4	39	0	8	9
Junior College	0	75	13	?	3	14	3	8	0
Public	1	130	2	?	3	40	23	12	0
School	0	0	0	?	2	0	0	1	0
Law	0	?	2	?	2	5	4	3	3
Medical	1	?	1	?	7	48	9	11	5
Business	0	?	1	?	1	2	1	2	2
Scientific & Technical	0	?	1	?	3	14	8	3	9+
Historical	0	?	1	?	1	1	1	4	9+
Other Special Libraries	0	150	2	?	2	28	7	3	0
TITLES CROSS REFERENCED	no	partial	yes	yes, names too	yes	yes	yes		no
FILING RULES	extensive	extensive	LC (all manual)	Rather;extensv.	LC (All manual)	Extensive	alphabetical (manual)		author/title (automatic)
RECORD STRUCTURE	350 chars;title & holdings	MARC(S), incomplete	7 fields, 80 char records; up to 99/entry	MARC(S)	35 fields, variable length, + header	MARC(S), modified	variable, similar to MARC		MARC(S), incomplete
DATA ELEMENTS									
Abbreviated Title	no	no	yes, but not as a cross-ref.	no	partial	yes	no		no
Former Title	no	yes	yes	no	yes	yes	yes		no
Publisher	no	no	no	no	no	yes	no		no
Place of publication	no	partial	yes	no	no	yes	yes		no
Classification	no	no	LC, Dewey, or SuDocs holding state	Dewey & NLM, partial	LC, SuDocs	in Holdings element	LC		no
Subject Headings	no	no	no	no	no	no	to be added		no
LC Card Number	no	no	no	yes, partial	yes	yes	no		no
ISSN	no	yes	no	yes, partial	yes	yes	to be added		no
Language	no	no	no	no	non-roman only	yes	to be added		partial
Active or Other Status Indicator	no	yes	partial	no	for EWSC only	no	yes		yes
Scope and/or History Note	no	yes	yes	no	yes	no	yes		no
Holding Library Code	local	modified NUC & local	local	NUC	modified NUC	NUC + local	local (alpha)		NUC
Holding Statement	brief structured	brief, structured	brief highly struct.	highly structured	structured	highly structured	brief, structured		brief,structured
AUTHORITATIVENESS	low	moderate	high	moderate (to be very high)	high	very high	moderate to high		moderate to high
COMPUTER	B6700	IBM 370/165	IBM 360/40	IBM 360/65	UNIVAC 70/7	IBM 360/148 VS	CDC 6400		IBM 360/91
CHARACTER SET	Upper case	Upper & lower case	Upper case	Full MARC	Upper case	Full MARC	upper case only		upper & lower case
COM PRODUCTION	No	Yes, by Zytron & state contract	Service bureau in Portland w/ state contract	Provided by state	No, but could contract for	Trying it out in April, 76	yes, by vendor		yes, by Zytron

APPENDIX E

TELECOMMUNICATIONS AND MESSAGE PROCESSING FOR LIBRARY NETWORKING

WILCO

Western
Interstate
Library
Coordinating
Organization

TELECOMMUNICATIONS AND MESSAGE PROCESSING FOR LIBRARY NETWORKING

A SYSTEM CONCEPT AND PROPOSAL OUTLINES

DRAFT - DRAFT - DRAFT

July 7, 1976

Revised August 13, 1976

This first draft is being distributed for review and comment to: The Western Council, the Steering Committee, NCLIS, the Library of Congress, and the following: Hank Epstein, BALLOTS; Don Simpson, BCR; James Kennedy, Amigos; Paul Schrank, OCLC; Earle Thompson and Lura Currier, PNBC; and Mary Jane Reed, WLN.

This working paper is intended to stimulate ideas, discussions, and actions aimed at rapidly developing more powerful -- and economical -- interconnections among major components in the emerging national library network by means of a well-designed telecommunications processing system.

Prepared By

Western Interstate Library Coordinating Organization (WILCO) staff

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1. INTRODUCTION

Within the next year or so, all the key components for regional and national networking will reach the fully operational stage of development. If these components are to be used effectively by the library community, they must be tied together by an efficient and economical telecommunications and message processing system tailored specifically to library needs.

This paper is presented as a first step in achieving Goal 2, design and development of a prototype telecommunications network that interconnects the bibliographic utilities, service centers, and western libraries, as described in WILCO's "Library Networking in the West: The Next Three Years." The WILCO staff has been charged by representatives of the utilities, service centers, and major resource libraries, meeting at Palo Alto, California, on 2-4 June 1976, to prepare a concept of a telecommunications and message processing system and to outline a set of proposals for carrying out major initial tasks in the development of such a system. This paper is the result of that charge.

An improved telecommunications capability is urgently needed by western libraries, which are located at great distances from each other and from the centers providing computer-based support for library operations. It is our hope that WILCO can contribute to the swift accomplishment of design and development projects being undertaken by the Library of Congress (LC) and organizations such as OCLC, NELINET, and the Research Libraries Group (RLG) to achieve an integrated communications system benefitting libraries in the West and throughout the country. The WILCO staff, in behalf of western networking organizations, could be a source for administrative and technical assistance, available on a continuing basis, for the planning and development of a telecommunications system for the evolving national library network.

2. BACKGROUND

The Western Interstate Library Coordinating Organization (WILCO) operates under the direction and sponsorship of the Western Council of State Librarians to provide a catalytic forum and a continuing staff resource to foster multistate library resource sharing efforts. WILCO is the vehicle for bringing together representatives of libraries and resource centers, bibliographic utilities, and service centers (networks) to discuss and act upon subjects of mutual concern in extending library cooperation in the West. A small staff, administratively located at the Western Interstate Commission for Higher Education (WICHE) in Boulder, Colorado, supports the Western Council and all other western librarians by performing coordinating, communicating, and experimenting functions.

The major components supporting western library networking are: the BALLOTS, Washington Library Network (WLN), and OCLC bibliographic computer utilities (as well as commercial utilities such as Blackwell North America, System Development Corporation (SDC), Lockheed, and New York Times retrieval services); Bibliographical Center for Research (BCR), Pacific Northwest Bibliographic Center (PNBC), WLN, and California Library Authority for Systems and Services (CLASS) service centers (as well as the Texas-based Amigos Bibliographic Council) which provide or act as distributors for library services in various parts of the West.

During June 1976, WILCO developed a set of goals and tasks to guide western library networking during the next three years. The overall aim of this program is to integrate the bibliographic data, computer utiliites, and library resources available to the West into an effective and efficient bibliographic collaborative that is coordinated with the evolving national system and that supports and extends regional library cooperation and resource sharing. The current concept of what these collaborative activities might achieve in the next three years envisions:

- The bibliographic utilities will be linked to allow on-line access to each other's files and the transmission of records from one to another. Each utility is expected to operate as a relatively free and autonomous agency.

- Access to the utilities will be provided by state or multistate service centers or "library networks," much as is currently the pattern in accessing OCLC.

- States in the West will continue to develop their own networks, incorporating all types of libraries, to expand internal resource sharing and increase the level of state self-sufficiency. Most states (either as a state or as individual libraries within the state) will purchase computer-based bibliographic services through the service centers rather than develop their own. States will be responsible for the development of their own union finding lists showing in-state locations of library materials; these lists will be created by merging the machine-readable records made available as a by-product of cataloging new acquisitions. through a bibliographic utility.

- Libraries maintaining in-house inventory files, such as circulation control records, will be linked into a telecommunications network that permits other libraries to access the files to determine the actual availability of items for loan.

All of these collaborative activities are dependent upon the development of a system to support communications between libraries and bibliographic utilities, as well as among libraries and service centers. Technology exists to support this kind of communication system, and it is likely that the range of services offered by common carries and value-added-networks (VANs) during the next three years will support, at an economical level, most of the requirements for library networking. The library community should carry out the requisite planning and coordination to take best advantage of the capabilities technology offers without undue delay.

3. INTER-COMMUNICATION NEEDS FOR LIBRARY RESOURCE SHARING

In examining the main requirements of western libraries for digital data communications in support of resource sharing, in view of our assumptions about networking development in the next three years, we note the following needs:

a. Access to centralized computer support for cataloging and other technical processing functions.
b. Use of records in multiple bibliographic data bases for technical processing, reference, and interlibrary loan functions.
c. Access to data bases showing locations of library materials.
d. Generation and switching of messages in connection with interlibrary loan functions.
e. Processing and switching of messages in connection with interlibrary reference, resource sharing coordination, and committee work functions.
f. Monitoring and measuring system performance.

In addition, library requirements for voice and video communications should be considered where these can be integrated with digital transmission facilities.

Let's consider these needs in greater detail. Access to centralized computer support for cataloging and other technical processing functions implies a number of libraries located anywhere in the country must be connected to a particular computer utility for lengthy periods of time. Transmission characteristics and costs dictate the necessity for grouping libraries so that they can share a medium speed (120 characters per second) and dedicated (leased) communications channel to the computer center. Because of the relatively fixed nature and high cost of this type of connection, it is not likely a library would choose to access more than one utility if a separate channel were needed for each; however, this constraint on a library's freedom of choice would be removed if utilities were interconnected such that a message could be transmitted from any source to any destination for essentially the same cost. While it is likely that each library will tend to use the utility that suits it best, for one reason or another, some libraries may exercise the option to use, say, the cataloging program of one utility and the acquisitions program of another utility. Thus, an initial assumption can be made (until more experience is gained) that a library telecommunications system should provide the capability for one library to make use of the processing capabilities of more than one computer utility.

Use of records in multiple bibliographic data bases for technical processing, reference, and interlibrary loan functions implies a differentiation between the computer programs used to process data and the data themselves. Access to processing programs was discussed above. Access to data implies the need to locate a particular record in the file of any utility and (if needed) transfer it to another utility for processing. For example, a user of the WLN system might look first in the WLN data base for a bibliographic record needed for cataloging a new acquisition. Not finding the record in the WLN data base, the user (or the system itself) might generate and transmit a search request to one or more other utilities (such as OCLC or the Library of Congress). If located, the record would then be transmitted to the WLN system. This capability would eliminate the necessity for each utility to maintain a massive file of records, many of which are not likely to be used by that utility's clientele; in effect, the national catalog data base could be distributed among LC and the other utilities rather than be duplicated at several locations around the country. The national citation data base already is distributed among utilities such as the National Library of Medicine (NLM), SDC, and Lockheed. In terms of the effects of this need upon telecommunications characteristics, any library located anywhere in the country must be able to access any utility for a brief period of time. Transmission characteristics and costs allow libraries to use a dial-up connection over public communications facilities and low (30 characters per second) to medium transmission speeds for searching data bases. However, the transmission of records and the switching from one data base to another could be done more effectively and economically over the same communications system needed for accessing computer utilities for the sake of processing

Access to data bases showing locations of library materials implies that location data need not (and probably should not) be physically co-located with bibliographic data. Since the bulk of interlibrary loan traffic is likely to take place within state boundaries rather than across state lines, there is a trade-off between the cost of communicating search requests among one or more files and the cost of maintaining centralized files of location data. To achieve the potential benefits of this trade-off, the communications system must provide the capability for assisting a user who is trying to find the location of a particular item. We envision this capability would work as follows:

a) user searches a catalog or citation data base to find a particular item (either as a specific title or author search, or as a subject search);
b) user requests the location of the item;
c) the system extracts the unique bibliographic identifier from the catalog record, such as the LC card number, and uses the identifier as a key to search a location file for holdings of libraries in close proximity to the user's library;
d) if locations are found by the search, they are displayed to the user; else the user is requested to designate another location file to be searched (or the selection can be handled automatically);
e) for the library designated by the user, the system transmits a search request, still using the unique identifier, to that library's circulation control system to determine the availability of the item for loan.

Transmission characteristics are similar to those discussed in searching data bases, but computer programming must also be provided to control and process transmissions.

Generation and switching of messages in connection with interlibrary loan functions is an extension of the need just discussed. Once an item is located and found available for loan, the system should assist the requester by issuing the loan request message, keeping track of the request's status, and so on. Where a completely automated interlibrary loan transaction is not possible, as would be the case where no location information were found in a data base or the lending library does not have a circulation control system, then the communications system must provide the capabilities of the current TWX-based systems now in use and, in addition, must provide a message generation and switching capability that TWX does not have. Much of an ILL request can be filled in by the system rather than requiring the user to prepare the complete text of a message. For photocopy requests, the communications system should provide the capability for transmitting retrieved citations directly to a photocopy center so that the requester need not transcribe the citations. The transmission characteristics for ILL messages take on the aspect of a switched network allowing, for relatively brief periods of time, any network message source to be connected to any other network destination, and with computer processing to handle message generation and processing using data provided in various data bases accessible to the communications system.

Processing and switching of messages in connection with interlibrary reference, resource sharing coordination,and committee work functions implies the array of capabilities offered by various computer conferencing programs. This need is assumed, since little experience is extant concerning how librarians might make use of the capability. Such a communications mechanism would be conversational in nature, would provide a written record (which telephone communication does not), and would be faster and more interactive than mail (a capability which TWX does not fully satisfy). Computer conferencing techniques provide for the transmission (and recording) of messages between one person and another, or between one person and several or all others participating; messages may be either public or private. Immediate or delayed interaction is supported so that participants can "talk" to each other conversationally or by appending comments to previous messages.

Monitoring and measuring system performance takes place on two levels. On the first level, this activity checks the quality of the transmission network itself, identifying interruptions, outages, and circuit degradation. On the second level, performance measures are statistically analyzed to provide data on traffic levels between various points, response time, distribution of message types flowing through the network, and so on. The latter kind of data may be used as input to network anlaysis models to devise more economical configurations for the telecommunications network.

4. CONCEPT OF AN INTEGRATED COMMUNICATIONS NETWORK FOR LIBRARIES

Considering the needs for interlibrary communication discussed in the preceding section, we have conceptualized an integrated communications network for libraries.* The network should be of the ring type, wherein all major nodes (i.e., the utilities and service centers acting as message switching centers) have access to each other. (The star type of network has worked well for OCLC by connecting libraries around the country to a single point but appears to be an inefficient design for interconnecting many nodes.) In the ring network, communication channels link major nodes to the nodes on either side of them, thus forming a roughly circular pattern. Messages move through the channels from node to node until they reach their appropriate destination. The major nodes on the ring may themselves be focal points for local star networks by which individual libraries gain economical access to the system.

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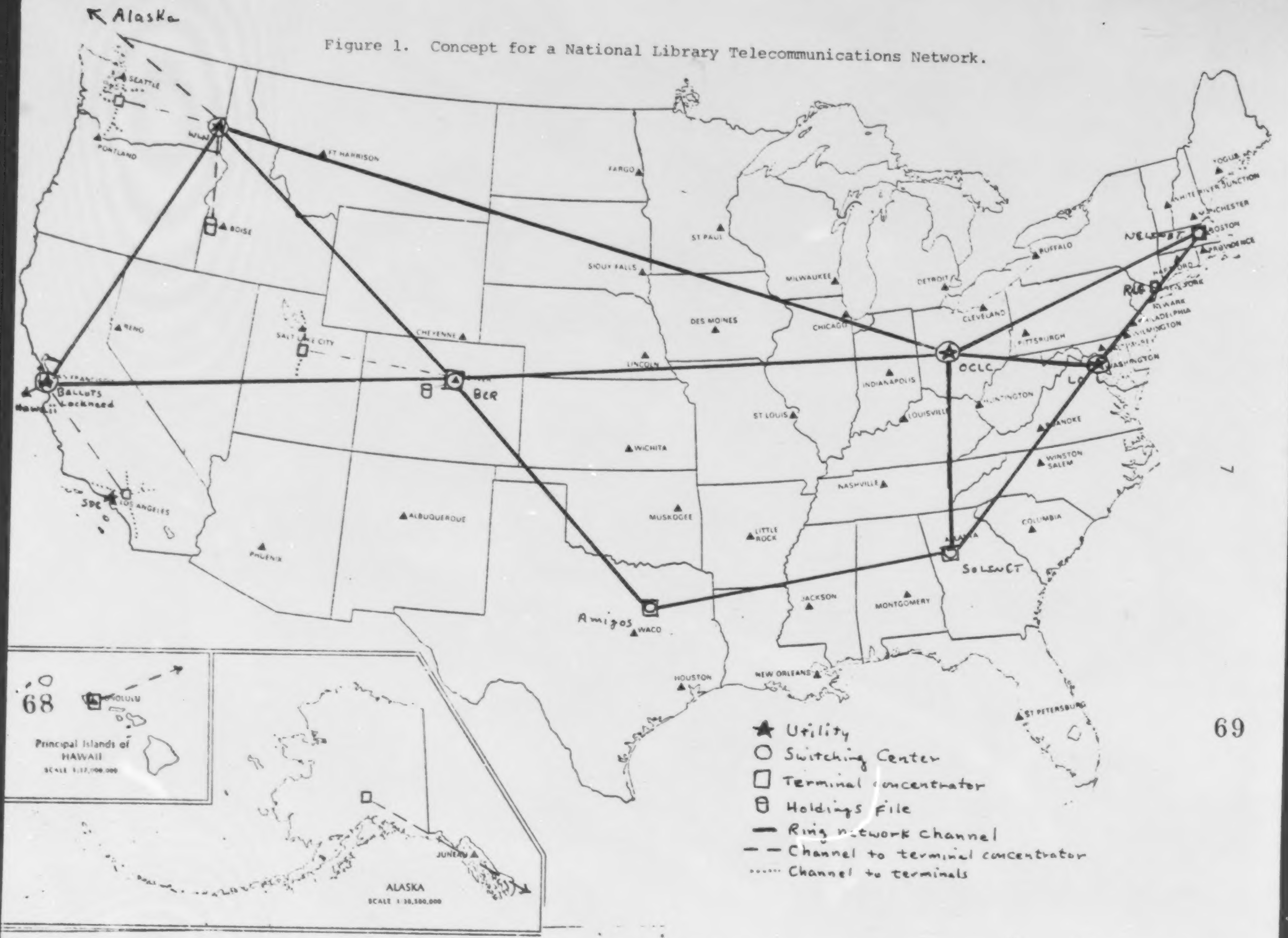
* This concept is based on the ideas of a number of people, and is similar to the proposed Phase II design for the RLG/LC interconnection project.

This general concept is illustrated in Figure 1. The major nodes for the ring network shown are WLN, BALLOTS, BCR, Amigos, SOLINET, OCLC, LC, and NELINET. (Note that these nodes are picked for illustration purposes only, as are the connecting channels shown in Figure 1; a rigorous network design analysis must be performed to choose the optimal configuration and location of nodes and channels.) In the Figure 1 schematic, a modified ring type network is illustrated because it seems instinctively desirable to provide additional channels directly between major service centers and the nearest utility.

The utilities are designated by stars in Figure 1. Certain utilities (BALLOTS, WLN, OCLC, and LC), because of their geographic location, are also shown as being switching centers, as are the BCR, Amigos, SOLINET, and NELINET service centers. Switching centers examine the destination for each incoming message. If the destination is for a library in the area served by the switching center, the message is routed to the appropriate terminal concentrator for delivery to the designated library. Otherwise, the message is simply passed to the next switching center in line. Switching centers may have processing functions, too, such as maintenance of and retrieval from a regional library holdings data base, as illustrated in the case of BCR. Terminal concentrators, designated in Figure 1 by squares, are the means by which individual libraries are connected to the telecommunications network. These concentrators are the hub of small star networks serving a local area to interconnect libraries there and to concentrate data transmission between the local area and the main network for the sake of economy. (Note that for clarity of the illustration, only a few concentrators and fewer still star networks are shown). The computers and programs installed at each switching center and terminal concentrator can be as powerful as economically desirable; again, a rigorous network analysis needs to be performed to determine how much processing power to distribute to the utilities, switching centers, and terminal concentrators for the best overall system performance.

The capabilities needed for the telecommunications and processing system are beginning to be developed by several organizations. OCLC has received a grant from the Kellogg Foundation to develop a "network supervisor" whereby OCLC users can access the SDC and Lockheed utilities from OCLC terminals. RLG and LC, under a Carnegie Foundation grant, are working on a project whereby the New York Public Library (NYPL) computer can access the LC computer to search LC files and obtain MARC and other records. NELINET has installed a minicomputer and is arranging with OCLC to use it as a concentrator for data transmitted between New England libraries and OCLC. Programming for the NELINET

Figure 1. Concept for a National Library Telecommunications Network.



minicomputer is being developed to handle terminals with different transmission characterisitcs so that the terminals can "talk" to each other. An ALA ISAD committee is designing a standard protocol structure for library telecommunications messages; these protocols should greatly simplify the design of message handling programs. NCLIS is fostering establishment of a working group that includes National Bureau of Standards representation to explore certain aspects of library telecommunications. Most encouraging is LC's recent activity in examining how it can best contribute to library networking development and in sponsoring meetings to bring together representatives of the key organizaitonal components in the evolving national network.

5. TASKS FOR INTEGRATING WESTERN COMPONENTS INTO THE NATIONAL NETWORK

There are several tasks to be accomplished to integrate western components into a national library network by means of the telecommunications system conceptualized in the preceding section. Each of these tasks is envisioned as the subject of a proposal to be cooperatively developed.

5.1 National Telecommunications System Definition Task Force

The telecommunications system described in this paper could be developed just for western libraries, but it is not reasonable to do so. Clearly, the best approach is to define and design the system on a national basis. Whereas currently development is proceeding on the strength of bilateral agreements between components of the potential national library network, as between RLG and LC, or OCLC and NELINET, we urge that a formal mechanism be established for reaching and acting upon multilateral agreements to which all the major network components can commit.

Fortunately, the Library of Congress has taken the lead by bringing together for discussions representatives from the major components. WILCO sees this as an opportunity that could rapidly lead to the establishment of a national task force as the mechanism by which the major components might, multilaterally analyze library telecommunications and message processing requirements and develop a system definition for a national library telecommunications system.

The Library of Congress should head the task force, and participants should include at least NCLIS, NLM, the National Agricultural Library, the Federal Library Committee, the Chiefs of State Library Agencies (COSLA), RLG, NELINET, SOLINET, MIDLNET, BCR, Amigos, OCLC, BALLOTS, and WLN. Representatives from other organizations such as ALA, ASIS, SLA, WILCO and the Association of Research Libraries (ARL) might serve as task force advisors.

The main objective for the task force should be to define a telecommunications system integrating individual development activities of the utilities, service centers, and states into an effective network benefitting all segments of the community. A major product resulting from the task force's work would be a system description document that:

a. outlines an economical network topology;
b. recommends an appropriate division of communications processing tasks among utilities, switching centers, and terminal concentrators;
c. establishes suggested standard protocols and formats for messages (incorporating the recommendations of the ALA/ISAD Committee developing protocols);
d. suggests which data transmission carriers would be most capable and least expensive for connecting the network nodes; and
e. outlines an implementation plan and schedule for system development.

A good model for the system description would be the Euronet Implementation Study.* The system description should be a guide to help organizations avoid developing redundant, divergent, or suboptimal telecommunications capabilities on their own, while providing adequate scope and flexibility for subsequent detailed system design to adapt to unexpected technological developments, designers' ingenuity, and changes in libraries' telecommunications requirements.

WILCO could support the task force, in addition to the participation of the western utilities and service centers, by offering the resources of its staff to provide ongoing technical and administrative assistance, perhaps serving as a secretariat for the task force. Over the next few months, the WILCO staff will explore with LC, NCLIS, and other organizations the prospects for preparing a joint proposal to establish the task force. A joint proposal submitted by the key components of the emerging national library and information network ought to be looked upon favorably by funding sources such as CLR, NSF, or private foundations.

5.2 Access to LC Files from BALLOTS and/or WLN

This project and the one described in Section 5.3 to interconnect BALLOTS and WLN are based on the assumptions that the programming for the RLG/LC project to provide access to LC files from the NYPL computer will be completed in the spring of 1977 and that both of these organizations will be willing to assist BALLOTS and/or WLN in making use of this design and software. The two projects described here could be done sequentially beginning with either, or in combination, as is most convenient to the organizations concerned. It appears that the time required to prepare a proposal and obtain funding for the projects would fit well with current implementation schedules for all the parties.

These two projects would provide an interim system and data base interconnection capability that could be cheaply and quickly implemented and would serve reasonably well for a two- or three-year period while a more advanced telecommunications system was developed. These projects would provide the means for exploring the impact of system interconnection on the utilities, service centers, and users, and would furnish data required for designing the telecommunications system conceptualized in this paper.

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* Euronet Implementation Study. Prepared for the Commission of the European Communities, Directorate General Scientific and Technical Information and Information Management, by Pandata BV, Rijswijk, ZH, 1975. (TR 5113-01). 2 volumes and Management Summary.

The current RLG/LC project to provide access to LC files from the NYPL computer can readily be replicated by the western utilities. Such a project would allow BALLOTS and WLN users to draw MARC and other records from LC files as needed, and would thereby reduce the need for those utilities to process and store records having a low likelihood of use simply for the sake of ensuring that users have adequate access to the records they do need.

Using the NYPL design work as a base, the western utilities would develop the software necessary to generate search messages to LC and to handle records and messages transmitted from LC as a result of the search requests. One service center, such as BCR, would provide the necessary training for terminal operators so they could use the new searching capability. WILCO would assist in preparing manuals and training packages for service center use, and would evaluate the results of the project in respect to the impact upon the utilities and the effectiveness of the capability to search LC files from the user's standpoint.

5.3 Interconnection of BALLOTS and WLN

The BALLOTS and WLN systems could access each other's files using much the same logic as needed for each to access LC files. Such an interconnection would allow BALLOTS users to check their catalog records against the authority files maintained by WLN, and users of both systems would have access to the cataloging and holdings data bases of the other system.

The availability of such an interconnection, particularly in combination with the capability of one or both utilities to access LC files, would have unpredictable effects on the libraries using each utility. Would these libraries tend to use one or the other utility exclusively? Would there be any tendency among western libraries using OCLC to shift to BALLOTS and/or WLN as a result of the interconnection? What would be the traffic characteristics of data transmissions between the utilities? Would the two utilities tend to divide between them the responsibility for providing catalog records needed by using libraries so that each utility did not need to maintain a complete and possibly redundant data base? What would be the effect on costs and pricing policies for utilities and service centers?

Using the design and software developed by LC for the RLG/LC project to transmit records to the NYPL computer accessing LC files, in addition to the

BALLOTS and WLN software developed in the course of the project described in Section 5.2, the western utilities could quickly implement the interconnection. One or two service centers, such as CLASS and WLN/PNBC, would provide training for users and assist in evaluating the impact of the new capabilities by collecting usage statistics and librarians' comments. WILCO would conduct the overall evaluation of the impact and would seek answers to the questions posed above.

5.4 Development of a Prototype Terminal Concentrator

Because a number of western libraries have contracted for access to on-line cataloging utilities, and many more are expected to do so over the next three years, there is an urgent need to reduce currently high telecommunications costs. NELINET has developed a minicomputer-based terminal concentrator and is arranging with OCLC for its installation to handle transmissions between Columbus, Ohio, and Wellesley, Massachusetts. Using NELINET's work as a base, as well as the proposed design for Phase II of the RLG/LC project and the system definition that might be developed by the project described in Section 5.1, one of the western service centers in conjunction with one utility should design and implement a terminal concentrator that would be a prototype other western organizations could replicate.

The prototype terminal concentrator should provide terminal handling processes such as code, speed and line discipline conversion (so that any terminal in use by a client library of the service center could "talk" to any other client's terminal as well as to any of the bibliographic utilities), data and message concentration, queuing and buffering. In addition, the concentrator should provide for communications among the client libraries (replacing TWX systems) and should be capable of easily interfacing with a switching center if the ring-type national library telecommunications system is developed.

One service center and one utility should be agreed upon to perform the design, installation and operation of the prototype concentrator. The other utilities and service centers should form an advisory committee to assist in the concentrator's design to ensure compatibility with their needs. Once proven, the concentrator should be adapted to work with the other utilities, and the other service centers may wish to install a concentrator of their own. Perhaps BCR and OCLC might be agreed upon as the service center and utility to develop the prototype concentrator in order that the West can take most advantage of the work NELINET has done. WILCO staff could provide technical assistance to the participants, could be responsible for developing the system test plan to verify that the concentrator meets design specifications and is ready for operation, and could evaluate the concentrator's performance to obtain data useful to other organizations in deciding to replicate the prototype.

Because this proposal would depend to some degree on work accomplished on the projects described in the preceding sections, it would be desirable to delay its preparation for several months.

5.5 Potential Proposals for Preparation at a Future Date

Based on the system definition prepared by the national task force, as well as on work accomplished in the Phase II of the RLG/LC interconnection project, utilities and service centers will need to provide for their interconnection via minicomputer-based switching centers. A proposal to design and install a prototype telecommunications system switching center and ILL and ILR message handling capabilities could be developed during the latter few months of the system definition project.

Should the interconnection of utilities prove to be as useful as expected, it may be desirable to develop a standardized interface language and protocols. Such a language would provide a common base for making use of the capabilities of each utility, so that users would not have to learn a completely different language for each utility. Each utility would be able to supplement the common base with its own specialized commands and processing strategies so that users could take full advantage of the particular capabilities provided by the design of that utility's processing system.

APPENDIX F

CONTINUING EDUCATION PLAN OF ACTION - 1976/77

WILCO
Western Interstate Library Coordinating Organization

WILCO CONTINUING EDUCATION

PLAN OF ACTION - 1976/77

DRAFT - JULY 1976

RATIONALE
GOALS
IMPLEMENTATION STEPS
ROLES

Western Interstate Commission for Higher Education P.O. Drawer P, Boulder, Colorado 80302, (303) 492-7317

PLAN OF ACTION

RATIONALE

WILCO's continuing education program seeks to improve library services in the West through a coordinated on-going program of continuing education for library personnel (and involved lay leaders) at all levels and in all types of libraries and information centers.

There is an ever growing array of continuing education offerings in a variety of formats and levels from many sources, including CLENE, state and regional library associations, library schools, individual institutions and consultants, networks, state library agencies, etc. WILCO's CE program objective is to coordinate and relate these various offerings to CE needs in the West and to assist in the definition and implementation of state and regional programs.

WILCO shares the rationale for the WICHE multi-state operation as stated in 1973:

> "By sharing multi-state resources, problems and experiments, WICHE is in a position to mount experimental programming and to evaluate techniques, materials, and results.... The overview offered by a multi-state operation makes it possible to develop programs which not only meet a real need, but which also contribute to an educational matrix which can result in a planned, continuous program of continuing education, rather than in the usual scattershot approach of unrelated, uncoordinated institutes, workshops, courses, and packages."*

GOALS

The goals of the WILCO CE program for 1976/77 are to:

1) Coordinate CE resources and activities in the West;

2) Assist in the development of need and problem statements at the local, state, and regional level;

3) Participate in CE planning and coordination at the regional level with the regional library associations, library schools, etc., and at the national level with CLENE and NCLIS;

4) Provide, in cooperation with CLENE, a clearinghouse (WESTEX) to coordinate and exchange information on existing CE resources (materials and personnel) in order to:

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* WICHE Continuing Education Program for Library Personnel, Illinois Libraries, May, 1973.

- maximize use of existing resources,
- reduce redundant development,
- identify areas for new development to meet specialized or common needs

5) Facilitate access to and delivery of CE materials, services, programs, etc.;

6) Assist in evaluating CE programs, materials, etc. and in making this information available throughout the West;

7) Sponsor or co-sponsor programs, seminars, etc. of interest in the West, and undertake or coordinate the development of CE materials to meet specialized or common needs;

8) Foster the use of a reward system, such as CEUs (Continuing Education Units), consistent with the national plan.

IMPLEMENTATION STEPS

The proposed implementation steps and responsibilities for each goal are listed below.

- GOAL 1: COORDINATE CE RESOURCES AND ACTIVITIES IN THE WEST.

1.1 Each state will be asked to designate a Continuing Education Communicator (CEC) or liaison team to work with WILCO. The character and responsibiliites of the CEC or team will be to serve as a link between the state and the region through WILCO. It is hoped that libraries of all types would be represented by the CEC or team.

1.2 WILCO will provide staff to support the CE program goals and implementation steps (an average of one FTE during the year).

1.3 WILCO staff will annually report to the Western Council on the CE activities undertaken during the past year and will present an action plan for the coming year.

1.4 WILCO will disseminate CE news in the WILCO Newsletter, published ten to twelve times per year.

- GOAL 2: ASSIST IN THE DEVELOPMENT OF NEED AND PROBLEM STATEMENTS AT THE LOCAL, STATE, AND REGIONAL LEVEL.

2.1 WILCO will convene a two- or three-day training/planning/information exchange workshop for state CECs, state team members, and invited participants from regional library associations and library schools. The content of this workshop will focus on state-level continuing education program planning and will provide training in such skills as needs assessment, identification of local continuing education resources, selection and evaluation of continuing education materials, use of consultants, contracting for services, how to conduct a successful workshop, how to organize a continuing education interest group at the state level, budgeting and financing continuing education activities, and development of a total continuing education program for each state. In addition, this group will discuss mechanisms for establishing the WILCO Clearinghouse. Appropriate authorities in each topic will be provided by WILCO to assure the highest quality of content and impact. The states will pay the travel expenses of their Continuing Education Communicator; WILCO's core budget will pay the cost of consultants, materials, and other workshop expenses. WILCO will prepare a report on outcomes from the workshop.

2.2 WILCO staff will spend at least two full days in each state working with the state Continuing Education Communicator (and others designated by the State Librarian) to assist in the development of specific continuing education activities to be conducted in each state. The result will be the State Continuing Education Activities Plan. The travel expenses of the WILCO staff member will be paid from the core budget. The state will pay all other costs of this working session. Each state will vary in its requirements in this regard. WILCO staff will remain flexible to help each state in the way best suited to its needs.

2.3 Throughout the year, WILCO staff will support the state Continuing Education Communicator or team, and assist in the successful implementation of the state-level activities plan. Depending on the situation, travel into the state will be paid by the state or WILCO core funds. State CECs can spend as much time as appropriate at the WILCO offices, working with staff at no expense to the state, other than travel costs.

2.4 WILCO will work with state library associations and/or their designated CE committees as appropriate to assist in the development of need and problem statements and CE plans. WILCO will coorindate state plans with regional and national plans and resources.

- GOAL 3: PARTICIPATE IN CE PLANNING AND COORDINATION AT THE REGIONAL LEVEL WITH THE REGIONAL LIBRARY ASSOCIATIONS AND LIBRARY SCHOOLS, AND AT THE NATIONAL LEVEL WITH CLENE AND NCLIS.

3.1 As of July 1976, WILCO became an organizational member of CLENE. WILCO staff will work actively with CLENE to enhance western CE activities, consistent with national planning.

3.2 WILCO will work with regional library associations (SWLA/CELS, MPLA, PNLA), library schools, and bibliographic centers, systems and networks to assure open communication and complementary programs.

3.3 WILCO will facilitate, as required, state and local access to CLENE information and publications. In addition, WILCO will submit information on western CE programs to CLENE to facilitate a broader awareness of current resources nationwide.

- GOAL 4: PROVIDE IN COOPERATION WITH CLENE, A CLEARINGHOUSE TO COORDINATE AND EXCHANGE INFORMATION ON EXISTING CE RESOURCES.

4.1 WILCO will initiate a Western Continuing Education Exchange (WESTEX). WESTEX will be an annotated and indexed file (inventory) of CE offerings and expertise available in the West. The major emphasis will be on local, state, and regional materials not otherwise documented. Each organization involved with CE in the West will be urged to supply information for inclusion into WESTEX. As appropriate, information from WESTEX will be forwarded to the CLENE Directory. Evaluation of each item in WESTEX will be prepared by WILCO staff or the submitting organization, following a form to be jointly developed by WILCO, CLENE and others interested in CE. (There is a need for consistency in evaluation. Thus, WILCO will work with CLENE to develop a standardized evaluation scheme.) WILCO will devise a means to make information in WESTEX available on a regular basis and on demand.

4.2 Through WESTEX, WILCO will actively seek to match local, state, and regional needs with existing resources and will alert CE developers to avoid redundant development.

4.3 WILCO will identify areas for new development to meet specialized or common needs unmet by existing resources.

- GOAL 5: FACILITATE ACCESS TO AND DELIVERY OF CE MATERIALS, SERVICES, PROGRAMS, ETC.

5.1 Upon request, WILCO will "broker" or be a contracting agency for a particular CE activity. A separate letter of agreement with a state specifying costs, time, place, content, materials, instructor and resource people, target group, etc. will be developed. WILCO will contract with the suppliers on behalf of the participating state. The state or organization will pay the direct cost of the developed CE activity plus five percent to WILCO for providing the brokerage service. The state or organization will provide a written evaluation of the activity and the information will be added to WESTEX.

5.2 On the advice of either the Western Council or at least two states, WILCO will purchase expensive CE materials (learning packets, video tapes, etc.) and make these available on loan at no cost to each participating state. The purchase price of these materials will come from the core budget. These materials will form the nucleus of a loan collection to be operated by WILCO. Each state previewing or using any of the materials will be asked to prepare a written evaluation.

- GOAL 6: ASSIST IN EVALUATING CE PROGRAMS, MATERIALS, ETC. AND IN MAKING THIS INFORMATION AVAILABLE THROUGHOUT THE WEST.

6.1 In line with CLENE guidelines and standards, WILCO will initiate an evaluation mechanism for CE materials, programs, etc. Evaluations will be actively sought as part of WESTEX activities.

6.2 For newly developing materials, WILCO will suggest quality control mechanisms to ensure high quality materials.

- GOAL 7: SPONSOR OR CO-SPONSOR PROGRAMS, SEMINARS, ETC. OF INTEREST IN THE WEST AND UNDERTAKE OR COORDINATE THE DEVELOPMENT OF RESOURCES TO MEET SPECIALIZED OR COMMON NEEDS OR PROBLEMS.

7.1 WILCO will sponsor or co-sponsor seminars, workshops, etc. that address common needs. The workshops will be self-supporting.

7.2 WILCO will assist state library associations, regional associations, networks, bibliographical systems, etc. to develop new CE programs and materials and encourage program content and structure to have appeal in a wider area. Once developed and evaluated, WILCO will add the data to WESTEX and CLENE, and assist in making the material more widely available.

7.3 WILCO will identify continuing education materials or learning packages needed at the local, state, or regional level, but not otherwise available from WESTEX or CLENE. WILCO will prepare or will assist organizations to prepare written specifications as to content, format, learning objectives, target group, etc. for review and approval. Once agreement has been reached on these instructional design elements, WILCO will, upon request, determine the cost or production of the desired materials. The requesting state or organization can then enter into a contract or WILCO can prepare a proposal to have the material produced at cost. All items so produced become the property of the sponsoring state or organization, with one copy deposited in the WILCO library of continuing education materials for preview by other participating states. Information about the newly produced material will be entered in WESTEX and CLENE. If the sponsoring state agrees, the newly produced material will be made avilable at duplication cost to other participating states.

- GOAL 8: FOSTER THE USE OF A REWARD SYSTEM, SUCH AS CEUs (CONTINUING EDUCATION UNITS), CONSISTENT WITH NATIONAL PLANS.

8.1 WILCO will pursue arrangements to offer Continuing Education Units (CEUs) according to national policies and standards.

8.2 In the interim, WILCO will provide a WILCO Continuing Education Certificate of Completion to each participant in a workshop or continuing education activity planned and sponsored by a participating state. The Certificates will be designed such that they can be converted to CEUs if the requirements for such conversion are met.

ROLES

WILCO suggests a division of roles among organizational components involved in continuing education, similar to that suggested by SWLA/CELS.*

1. WILCO (and the Western Council)

    a. Coordinate activity among the states. Arrange to share expertise and packages when common needs emerge in various states.

    b. Provide a clearinghouse (WESTEX) and maintain a regional calendar. Also, publicize who the experts are, what help WILCO can offer, what packages are available, etc.

    c. Sponsor and co-sponsor pre-conferences, institutes, workshops, etc.

    d. Initiate experimental activity where gaps in knowledge are identified.

    e. Keep in touch with related regional activity in other disciplines, e.g., medicine, nursing (especially expertise available in other WICHE programs).

    f. Assist states to assess needs; solicit feedback.

    g. Develop a plan for the West based on these needs. The plan must have built-in flexibility.

    h. Provide avenues for publicity and dissemination of information, e.g., WILCO Newsletter.

    i. Identify and generate funding for continuing education.

    j. Identify expertise in various subject fields.

    k. Demonstrate CE activity by establishing prototypes. Solicit grant applications from specific libraries or agencies and initiate contract.

    l. Organize a reward system with certificates and CEUs.

    m. Create an awareness and sense of need for continuing education.

    n. Establish a mechanism for evaluating CE materials.

    o. Contract with states and organization to provide CE activities.

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*As outlined in SLICE, "Continuing Education for Library Staffs in the Southwest," by Allie Beth Martin and Maryann Duggan.

p. Coordinate along with states, regional plans with the national scene (CLENE).

2. Library Education (graduate and under-graduate programs).

   a. Create and fund faculty positions with expertise in continuing education.

   b. Provide formal coursework on campus and by extension.

   c. Conduct institutes and short courses, seminars, workshops, tutorials.

   d. Help evaluate programs.

   e. Provide consultant services.

   f. Help train continuing education specialists.

   g. Cooperate with each other (e.g., divide subject-geographical areas for continuing education purposes).

   h. Experiment; develop packages.

   i. Establish, in individual schools, continuing education programs (locally funded).

   j. Alert students to their need for lifelong education and their responsibilities for continuing education on the job.

3. State Library Agencies

   a. Plan, implement, and evaluate state-wide continuing education programs based on needs identified in overall library planning activity (for libraries of all types).

   b. Assign staff to be responsible for continuing education.

   c. Commit funds.

   d. Provide consultant services for individual libraries and for library staff seeking to advance themselves.

   e. Publicize regional and in-state opportunities for continuing education.

   f. Conduct institutes, workshops, seminars.

   g. Participate in development of reward system.

   h. Participate in WILCO at regional level.

4. Bibliographical Centers and Networks

   a. Support local, state, and regional continuing education activity.

   b. Develop specialized education packages in support of network services and networking.

   c. Provide continuing education to update and maintain facility with network services.

   d. Explore new mechanisms for delivery of continuing education, such as computer assisted instruction.

   e. Help evaluate materials.

   f. Co-sponsor continuing education activities with other groups.

5. Library Associations (state associations, associations of school librarians, special library associations, district and local associations).

   a. Incorporate planning for continuing education in the program of work of the association.

   b. Establish a continuing education committee or council.

   c. Commit association funds.

   d. Participate in development of a state-wide library plan which builds in continuing educaiton.

   e. Conduct workshops, seminars, institutes and tutorials.

   f. Commit conference time to continuing education.

   g. Identify continuing education experts in the membership.

   h. Provide a communication channel for continuing education activity through association publications.

   i. Help evaluate CE programs.

6. Individual Libraries

   a. Identify continuing education needs as an outgrowth of long-range planning and management by objectives.

   b. Solicit needs from individual staff. Encourage personnel development for all.

   c. Commit staff time to take advantage of continuing education opportunities.

d. Include continuing education in the budget.

e. Provide feedback on needs and evaluation of regional and statewide continuing education programs.

f. Prepare packages for local use and export.

g. Participate in informal cooperative programs sharing expenses with other libraries in the area.

h. Co-sponsor continuing education activities with other groups.

7. Individual Library Employees

a. Develop personal goals for continuing education.

b. Commit personal time and money.

c. Support library association continuing education activity through membership and active participation.

APPENDIX G

LIBRARY NETWORKING IN THE WEST: THE NEXT THREE YEARS

LIBRARY NETWORKING IN THE WEST: THE NEXT THREE YEARS

A Working Paper Describing Goals and Tasks
to which Western Library Organizations
are Committed to Foster
Interstate Resource Sharing

FIFTH DRAFT
22 September 1976

This document has been prepared by the staff of the Western Interstate Library Coordinating Organization in collaboration with representatives of the Western Council of State Librarians (H. Vincent Anderson and Roderick Swartz); BALLOTS and the Stanford University Libraries (Hank Epstein and David Weber); Bibliographical Center for Research (Donald Simpson); California State Library (Gerald Newton); Ohio College Library Center (H. Paul Schrank); Pacific Northwest Bibliographic Center (Earle Thompson, University of Montana, and Lura Currier); Washington Library Network (Mary Jane Reed); and Gerald A Rudolph, University of Nebraska.

The fifth draft contains revisions suggested by the following reviewers: Page Ackerman, University of California at Los Angeles; Kenneth Allen, Eugene Llewellyn, Marion Milczewski, University of Washington; Norman Alexander, Southern Oregon College; Joanne Arnold, WICHE Commissioner, University of Colorado; Russell Davis, Utah State Librarian; Roger Hanson, University of Utah; Donald Hendricks, TALON Regional Medical Library; James Kennedy, AMIGOS Bibliographic Council; W. David Laird, University of Arizona; Marcia Lowell, Oregon State Librarian; Theodore Ryberg, University of Alaska; Alexi Shuman, Nebraska State Library Commission; Margaret Warden, State Senator, Montana.

This draft is being distributed widely for review by librarians and other interested persons who have not yet had the opportunity to comment on these goals and tasks to guide western library resource sharing.

W——WILCO——E

Western Interstate Commission for Higher Education • P.O. Drawer P, Boulder, Colorado 80302 • (303) 492-7317

ABSTRACT

This draft concept and guide for fostering development of library resource sharing in the West over the next three years lists major goals and tasks, together with underlying assumptions regarding the environment for networking. The paper indicates what needs to be done, and by whom, to meet the requirements of western librarians for bibliographic and information access support via networking. This draft is being distributed for comment and suggested revisions, which should be sent to WILCO, WICHE, P. O. Drawer P, Boulder, Colorado 80302.

TABLE OF CONTENTS

I. INTRODUCTION

II. DEFINITIONS

III. CONCEPT OF THE INTEGRATED BIBLIOGRAPHIC COLLABORATIVE

IV. GOALS AND STRATEGIES FOR ACCOMPLISHING THEM

V. ASSUMPTIONS

VI. SCHEDULES

I. INTRODUCTION

The purposes of this document are to:

1) review the goals for the development of an integrated bibliographic collaborative for the West (defined as the complex of libraries and networking organizations cooperating in a coordinated manner to facilitate library resource sharing);

2) air the assumptions underlying this concept of the coordinated bibliographic collaborative;

3) establish a list of tasks and responsibilities for undertaking them, for improving and extending the usefulness of the bibliographic collaborative over the next three years.

The paper is preliminary and should be considered a draft. It is intended to stimulate conversation and provide a mechanism through which decision makers can focus on planning for the future. The paper has purposely been kept as brief as possible to encourage recipients to read and consider it thoroughly. Your comments and suggestions are solicited; please send them to WILCO, WICHE, P.O. Drawer P, Boulder, Colorado 80302 (or telephone Eleanor Montague or Karl Pearson at 303-492-7317). You may wish to provide a copy of your comments to your state librarian and to appropriate organizations listed on the cover of this document.

It may be useful if in studying this document the reader also referred to A Review of Potential Components for the Western Bibliographic Network (Karl Pearson and the Project Staff, WICHE, March 5, 1976, Catalog #2B121), for a discussion of the various organizations in the West currently providing services and products.

This document is an outcome of work supported by the Western Council of State Librarians and the Council on Library Resources (CLR Grant 614), and performed by the individuals named on the cover who have graciously given freely of their time and knowledge.

II. DEFINITIONS

Bibliographic utility: An organization offering computer-based support for technical and public service operations to a number of libraries. The bibliographic utilities considered in this document are: BALLOTS and the computer operation portion of OCLC and the Washington Library Network. Commercial vendors of cataloging and on-line retrieval services can also be considered as utilities. The Library of Congress (LC) may also act as a utility in the near future in allowing access to its on-line files. Note that the same organization may have both a utility component and a service center or networking component (e.g., WLN, OCLC).

Service center: An organization assisting library resource sharing by acting as a distributor or broker of computer-based services from one or more bibliographic utilities in a particular region, or the operator of other bibliographic services such as maintaining a union file of location information or a photocopy center. The service centers considered in this document are: AMIGOS

Bibliographic Council, Bibliographical Center for Research (BCR), the California State Library's Union Catalog (CSLUC), California Library Authority for Systems and Services (CLASS), the Pacific Northwest Bibliographic Center (PNBC), and the resource-sharing portion of the Washington Library Network (WLN). Service centers may also be called library networks.

Western Council: The group of State Librarians in the West that currently fund and direct the Western Interstate Library Coordinating Organization (WILCO). Currently there are nine members of the Council: the State Librarians of Alaska, Arizona, California, Idaho, Montana, Nevada, Oregon, South Dakota, and Washington. These State Librarians are responsible for representing the interests of all librarians within their states and for coordinating state resource sharing activities with similar activities in other states and adjacent Canadian provinces. The seventeen westernmost states and the western provinces of Canada are eligible for membership in the Western Council.

Western Interstate Library Coordinating Organization (WILCO): WILCO, as an organization, consists of the Western Council, advisors, and a small staff. It provides a forum and a catalyst for coordinating and facilitating library resource sharing activities among the western states and Canadian provinces. WILCO provides a vehicle for the expression of common interests and concerns among western librarians in respect to regional, national and international resource sharing. WILCO is administratively located at the Western Interstate Commission for Higher Education (WICHE), Boulder, Colorado, and incorporates the former Continuing Education and Library Resources Program of WICHE.

III. CONCEPT OF THE INTEGRATED BIBLIOGRAPHIC COLLABORATIVE

Over the next three years, the activities undertaken by the various organizations involved in western library cooperation should lead to increased integration of resource sharing components: bibliographic data, communications systems, bibliographic utilities, service centers, and library resources. This process will begin to make available to the West an effective and efficient bibliographic collaborative that is coordinated with the evolving national system, and that supports and extends regional library cooperation and resource sharing. The current concept of what these collaborative activities might achieve in these three years envisions:

- The computers of bibliographic utilities (WLN, BALLOTS, OCLC, LC and perhaps others, such as the University of Chicago) will be in the course of being linked to allow on-line access to files and the transmission of needed records from one to another. Users may tend to select a particular utility for the bulk of their bibliographic service needs. Each utility will remain a free and autonomous agency. An economical telecommunications network meeting the communications needs for libraries may be in development.

- Access to the utilities may be supported by state or multistate service centers, or "library networks," much as is currently the pattern in accessing OCLC. In the West, there may be at least four such centers (PNBC/WLN, CLASS, BCR and AMIGOS) each of which will serve states and individual libraries in a pattern consistent with efficient and effective service training, maintenance, etc. Users will probably contract with a service center for processing support from one particular utility, but may also be able to search the data base of other utilities. Centers may arrange with each other to obtain assistance in delivering products and services. Some utilities may serve some users directly rather than through a service center.

- Each utility will maintain as large a bibliographic data base as needed to support its users. There may be a movement towards maintaining infrequently used bibliographic records in a national file to reduce the burden of storing and processing unneeded records at each utility. There will be a movement toward coordination (nationwide) of bibliographic record creation and coverage of unique and non-print resources.

- It may be more economical in the future to maintain records of libraries' holdings in files separate from cataloging data, but linked to the latter by means of a unique identifier such as the LC card number. Holdings records may be maintained at local (e.g., circulation control files), state (e.g., state union catalogs), regional (e.g., service center files), or central (e.g., files at the utilities) locations. This distribution of holdings files should support local and state resource sharing and minimize non-essential interstate loan requests.

- Increasingly, bibliographic verification and the location of recently-published materials for the purposes of interlibrary loan will utilize union catalogs of state or multistate holdings. While the union catalog may be maintained on-line by a utility, other forms such as microfiche) of the catalog could be produced for widespread use by libraries without terminals. In one or more localities, it may also be possible to search the circulation control files of individual libraries to determine the availability of material for loan before transmitting an ILL request. A computer-based message switching capability may be under development for automatically transmitting ILL requests.

Because of the rapid evolution of the bibliographic collaborative as technology changes and new ideas appear, this general concept will need frequent updating and restatement to remain serviceable as a guide for coordination and development of the collaborative. A three-year time frame was selected for the tasks described in this document, rather than the more common five-year time frame for planning, because library networking is evolving so fast. The general concept is an optimistic forecast of where networking may be, and in what directions it may be moving, three years from now.

IV. GOALS AND STRATEGIES FOR ACCOMPLISHING THEM

The development of the bibliographic collaborative envisioned for the West over the next three years revolves around the following goals and their associated tasks. The goals listed are those for the integrated bibliographic collaborative representing all segments of the western library community, and are not per se goals just for guidance of WILCO or any other organization. In these goals, the western library community speaks as a whole. Most of the tasks to accomplish the goals have to be carried out by organizations other than WILCO. These organizations are asked to commit their resources to accomplish mutually agreed upon objectives for strengthening regional and national capabilities for providing every citizen full access to available information resources.

GOAL 1: IMPROVE THE EFFECTIVENESS OF THE ORGANIZATIONS CONTRIBUTING TO THE DEVELOPMENT OF REGIONAL AND NATIONAL RESOURCE SHARING SYSTEMS.

The State Librarians of the West constitute the most logical group to coordinate interstate library cooperation. They are responsible for improving the level of service provided to all a state's citizens by all types of libraries, and they have traditionally supported regional services such as PNBC and BCR. However, the directors and staff of the region's libraries, service centers and utilities, having the direct responsibility for serving their patrons and users, must participate in decision-making affecting state and multistate resource sharing. WILCO can be the vehicle through which the Western Council can provide the forum for discussion and agreement by all organizations concerned in state and multistate activities leading to coordinated and effective interstate and national sharing of library resources as envisioned in the program proposed by the National Commission on Libraries and Information Science.

All but the last two tasks listed under this goal are ongoing or on-demand in nature, rather than discrete activities with a specific beginning and end.

Tasks:

1.1: The bibliographic utilities and service centers are invited to work with the Western Council and WILCO staff in developing this regional bibliographic collaborative concept and plan throughout the next three years.

1.2: The Western Council will include representatives from key western libraries of all types, service centers and utilities in making policy decisions affecting resource sharing. The Council will designate advisory groups and sponsor task forces as needed.

1.3: On a continuing basis, the WILCO staff will monitor and report the activities and plans of the organizations involved in the regional and national systems. The Western Council will sponsor the WILCO newsletter with 8 to 12 issues each year as a means for communicating the current status of networking activities to all persons interested. The regional bibliographic collaborative concept and plan (as begun with this document) will be modified as necessary and reissued.

1.4: The Western Council (and its advisors) will meet on a regular basis to review the current status of coordination efforts and to identify current priorities.

1.5: The Western Council will sponsor meetings that advance the purpose of system coordination and integration, and particularly those meetings described in other tasks.

1.6: Under guidance of the Western Council, the WILCO staff will assist states, as requested, in developing continuing education programs that address how library managers and staff should make most effective use of current and projected capabilities of the evolving bibliographic collaborative. WILCO will acquire or develop training packages to assist library managers and staff to plan and carry out the organizational and operational changes necessary to take best advantage of computer-based services and improved interlibrary loan capabilities.

1.7: The WILCO staff will consult and advise, as requested, with the libraries and other organizations that are western components for the national library and information network proposed by NCLIS.

1.8: The WILCO staff will assist the Western Council and other librarians in informing state and local library boards about the significance, costs and benefits of library networking in improving information services for all citizens.

1.9: WILCO will:

- provide a region-wide forum for planning and cooperation;
- identify specialized expertise in the region and facilitate access to this expertise;
- provide a clearinghouse for information on new technologies, available systems and services as well as on continuing education offerings;
- provide an established mechanism to address problems of and propose solutions for improving resource sharing, continuing education, data collection for planning purposes, and library cost analysis;
- facilitate regional research and development programs to reduce redundant development and identify needed areas of research;
- assist the utilities, service centers, state agencies and regional library organizations in developing a cost-beneficial strategy for building compatible and distributed machine-readable data bases; assist in determining the most effective and cost-justifiable mix of access to the data (on-line, fiche, etc.);
- identify telecommunications facilities, computer capabilities and data bases available in the West; help to identify ways of extending the cost-effective use of these aids by libraries in the West;
- play a coordinating, facilitating, communicating and experimenting role in the areas of continuing education for library personnel and resource sharing.

1.10: The Western Council and WILCO staff will investigate advantages and disadvantages of an interstate library compact among the western states to serve as a long-range vehicle for the bibliographic collaborative.

1.11: Under terms of a grant from USOE, WILCO will develop statistical indicators (consistent with national standards for library statistics) for measuring system performance and for providing data needed for planning. The WILCO staff will collect, analyze, and maintain needed data, and will assist other organizations in making use of data and analytical findings.

Impact:

Library service for western citizens is hampered by the uneven distribution of population, the great distances between communities, the scarcity of information resources in many areas, and the steeply rising cost and volume of library materials. These problems can be alleviated if western libraries, service centers, and utilities coordinate their plans and activities so that the western states can help themselves and each other to make better use of library resources -- both human and material -- that are available in the region. WILCO can provide both the forum in which all the organizations concerned with resource sharing decide what coordination is necessary and support for those organizations in carrying out the decisions.

GOAL 2: DESIGN AND DEVELOP A PROTOTYPE TELLECOMMUNICATIONS NETWORK THAT INTERCONNECTS THE BIBLIOGRAPHIC UTILITIES, SERVICE CENTERS, AND WESTERN LIBRARIES.

Strategy:

Libraries need cheaper and better telecommunications if they are to be able to gain the most advantage from computer-based services and from sharing each other's material and human resources. Current minicomputer and communications technologies provide the capability for creating a telecommunications system that will allow libraries economically to transmit/receive data, both among themselves and between themselves and the various computers around the country that support library operations.

Some service centers intend to install minicomputer data concentrators to which the lines to OCLC will connect. (NELINET already has one installed and is on the verge of completing contractual arrangements with OCLC.) The Research Library Group (RLG) and LC have been funded to design an interconnection between their computers, eventually via minicomputer front ends that would be telecommunications processors. Planning for the use of these minicomputers-- their technical configurations, operating programs, and standardization of message protocols -- should be coordinated both to ensure compatibility and to reduce development costs. Immediately, the technical staffs of the utilities and service centers should begin continuing discussions on their plans for telecommunications. A national task force should be established to perform system analysis and design, including the completion of standards affecting transmission of library data and messages, leading to development of a minicomputer-based library telecommunications network. While such a network is being created, the utilities and service centers in the West should establish their own task force to deal with the efficient current use of the region's communications system in providing access to the utilities.

Tasks:

2.1: WILCO will host one or more meetings among librarians and representatives of utilities and service centers to review user and technical requirements, problems, and plans for library telecommunications service in the West, and to generate one or more grant proposals for interconnecting utilities and service centers via telecommunications.

2.2: WILCO, the utilities, and the service centers will urge and participate in the establishment of a national task force to develop standards for library telecommunications messages and protocols, to define a nationwide system for interlibrary communication, and to coordinate design and development of components of that system. WILCO will explore the similarity of library telecommunications requirements with requirements of other governmental agencies in the West to determine the need for interagency coordination.

2.3: BALLOTS and WLN, when RLG and LC are ready, may install a direct computer-to-computer connection based on the Phase I RLG/LC project design to allow each utility (and its users) to access LC files for purposes of searching and copying LC records to the utility's file via telecommunications. Such a project should include user evaluation of the benefit of such a capability.

2.4: One service center and one utility may, as a pilot test, develop a data concentrator to reduce costs for data communications between the center and the utility. The concentrator could probably be similar to that being developed by NELINET for connection to OCLC. Should the pilot test be successful, additional concentrators may be installed at other service centers and a pilot test may be performed to provide a concentration capability between one service center and multiple utilities.

2.5: The bibliographic utilities, in consultation with the service centers, may collaboratively plan a communications interface for mutual access to each other's files and exchange of data. As an interim capability before on-line transmission between utilities, BALLOTS, OCLC, and WLN, with advice from the service centers, may provide the capability of access to their files from dial-up terminals used for searching purposes (as distinct from cataloging or other processing purposes) and for allowing users to identify records to be transferred from the files of one utility to the files of another via records output in MARC format on tape.

Subsequent to this activity and to the project described in Task 2.3, BALLOTS and WLN may install a telecommunications-based interconnection between the two computers.

2.6: WILCO and two or more western libraries using minicomputer-based circulation control systems will investigate the feasibility of system interconnection along the lines of the project being carried out in the North Suburban Library System of Illinois.

2.7: WILCO will investigate (in conjunction with other organizations and projects) the feasibility of using satellite communications for long distance transmission of library data.

2.8: BALLOTS, OCLC and WLN, in conjunction with the service centers and perhaps with other utilities, should determine the design and development tasks which would be required to provide users with:

a) the ability to use their own terminals to access other data bases;
b) standard language and user protocols to search each utility's data base.

Impact:

Better telecommunications service and interconnection of the bibliographic utilities so that a library has access to the files and programs of more than one system are almost totally inter-related aspects of a top priority need for library networking. The West can - and should - move as rapidly as resources of funds and people can be obtained to link WLN and BALLOTS to LC. Links with OCLC must also be developed so that the users of that system have access to the WLN, BALLOTS and LC files. Data concentration and message switching hardware and software can provide the means for establishing the necessary links while providing much more powerful - and perhaps cheaper - communication among libraries for data transmission, inter library loan, reference and conferencing than existing teletype and telephone circuits.

With interconnection and better telecommunications, a library in the Northwest could, as an elaborate example:

a) search the OCLC file and have a catalog record transferred to WLN;
b) use the transferred record as the basis for placing an order using the WLN acquisition system;
c) transmit an ILL request for the item for use until the order is filled;
d) complete cataloging for an item when received, using WLN.

GOAL 3: STRENGTHEN AND EXTEND THE CAPABILITIES OF THE EXISTING AND POTENTIAL SERVICE CENTERS FOR:

a) ACTING AS DISTRIBUTORS FOR THE UTILITIES AND CONTRACTING FOR BIBLIOGRAPHIC PRODUCTS AND SERVICES FROM VARIOUS SOURCES;

b) PROVIDING CENTRALIZED PURCHASING OR CONTRACTING FOR NETWORK RELATED EQUIPMENT, MAINTENANCE AND COMMUNICATIONS SERVICES;

c) REPRESENTING USERS TO THE UTILITIES IN IDENTIFYING NEW OR DIFFERENT PRODUCT AND SERVICE NEEDS;

d) TRAINING USERS OF COMPUTERIZED SERVICES; AND

e) PARTICIPATING IN ASSISTING STATES AND INDIVIDUAL LIBRARIES IN RESOURCE SHARING ACTIVITIES.

Strategy: Each service center will establish its own set of tasks and schedules for accomplishing some or all of the goals. Service centers may assist other centers in carrying out these activities. On request, WILCO will provide advice and assistance to service centers in improving and meshing their capabilities.

Tasks:

3.1: The service centers may assist each other in providing descriptive materials for utility products and services to allow potential library users to decide whether or not to use them.

3.2: Service centers may contract with each other as desirable to provide their users with capabilities not currently available. Users will seek services first from their traditional or nearest service center.

Impact:

Any library in the West should have an appropriate service center through which the library can obtain necessary support and assistance in procuring networking products and services, rather than having to negotiate contracts individually with the bibliographic utilities. Users may benefit from economies made possible through service center purchasing and network management functions.

GOAL 4: DEVELOP AND IMPROVE THE CAPABILITIES OF THE BIBLIOGRAPHIC UTILITIES TO SUPPORT LIBRARIES WITH AUTOMATED SERVICES AND PRODUCTS, AND TO PLAN FOR PARTICIPATION IN THE NATIONAL BIBLIOGRAPHIC SYSTEM.

Strategy: WLN, OCLC and BALLOTS, jointly and with assistance from the service centers, should develop and extend their capabilities to provide services and products to western libraries.

Tasks:

4.1: WLN, OCLC, BALLOTS and the service centers, with WILCO assistance as requested, should hold a series of information meetings to explore thoroughly the details of communications lines and services, terminal equipment, and user training needed to extend their services in the region.

4.2: The utilities may need to minimize storage and processing costs by maintaining in their own files only those bibliographic records (such as current MARC records) likely to be used by their clients. Clients will occasionally need rapid access to records not available in a utility's file. WLN, BALLOTS, OCLC and LC should discuss plans for disposition and storage of catalog records (such as those obtained via COMARC) that are not likely to be used by the clients of a particular utility.

Impact:

Western librarians and library patrons should enjoy the benefits provided by the utilities at the earliest opportunity. The utilities should take advantage of each other's experiences and planning in order to speed up the improvement and extension of their capabilities, products and services.

GOAL 5: MAINTAIN HIGH STANDARDS OF QUALITY IN CATALOG RECORDS INPUT TO UTILITIES' FILES BY WESTERN LIBRARIES.

Strategy: All users will be expected to input high quality catalog records, adhering, where possible, to established national standards. The utilities should provide a capability for managing several authority files to support needs of special, public and school, as well as academic libraries. Machine-readable cataloging data available from other sources (e.g., LC, another utility) should be acquired by a utility as needed by users.

Tasks:

5.1: A task force consisting of representatives of various types of libraries, the service centers and the utilities should be formed to help in the development of national standards for the content and quality of bibliographic records input to a utility's data base by western libraries.

5.2: WILCO, in conjunction with the task force, will explore ways of providing incentives to libraries with a significant volume of acquisitions to perform their original cataloging input to a utility's file in accordance with national standards.

5.3: States should evaluate internal needs and means for funding the initiation of BALLOTS, WLN or OCLC service in key libraries in the state that agree to input original cataloging in accordance with national standards, in accordance with the schedule for availability of service. WILCO will assist the state in developing incentives for libraries to contribute existing machine-readable records to regional data bases.

5.4: BALLOTS, OCLC and WLN, with advice from users, should evaluate the utility of adding files representing special collections such as that of NICEM for AV educational materials, to the cataloging data base and loading selected available files already in machine-readable form.

5.5: A task force should be formed to establish multiple authority structures that meet special user needs, and to investigate the impact on utilities and service centers. Responsibility should be assigned to a specific organization as the manager for each authority file and its coordination with other authority files. Since each authority list should be at least de facto a national standard, each designated agency should have national standing or recognition. The Western Council, service centers, and the library associations in the region should seek the establishment of such standards and the designation of responsible agencies.

Impact:

This goal is aimed at maintaining cataloging data bases at a high level of quality without introducing delays in making new records available to other users, while at the same time acknowledging the differing requirements for cataloging standards among diverse types of libraries. Since computer technology provides the capabilities needed for supporting quality control and standardization, as well as for use of multiple ways of searching for particular record, western librarians should take advantage of these capabilities. As a whole, the West is sufficiently large to be able to influence national standards and to set interim standards for its own use as needed to make computer-based cataloging support more effective.

GOAL 6: CAPTURE AND PROVIDE ACCESS TO HOLDINGS DATA REPRESENTING THE CURRENT ACQUISITIONS OF WESTERN LIBRARIES, CONSISTENT WITH EXISTING AND DEVELOPING RESOURCE SHARING PLANS.

Strategy: The accumulation of current holdings data should be coordinated by a responsible agency on a state or multistate basis. For libraries in each state currently using machine-readable cataloging, either through OCLC, BALLOTS or WLN, or obtaining cards or fiche catalogs from a commercial vendor, a machine-readable copy of new records should be acquired. These records can be maintained by a utility, service center, state institution or vendor, and used to publish a variety of products for wide distribution in each state or multistate region. Cataloging data representing the breadth of current acquisitions among western libraries might be added to the file of some utility if not already contained in a data base.

Tasks:

6.1: The service centers and WILCO should immediately encourage each state to begin planning to capture holdings information in machine-readable form on current additions to the collections of key libraries and to produce state holdings lists. The lists should provide search points by author, title and subject, and ought to be compatible for potential merger with other state or multistate lists.

6.2: State library agencies should begin planning for inviting libraries within their state to contribute holdings data. The agencies should also arrange for funding sources as needed for production and use of the lists on microform or other medium.

6.3: WILCO will assist state library agencies, service centers, and resource libraries in evaluating the utility of the state-based holdings lists. The first evaluation will be addressed to questions about the value of microfiche lists as compared to on-line file searching, which libraries are most useful to have represented in the lists, and optimal combinations of states and types of libraries in a single list.

6.4: WILCO will actively encourage the formation or progress of national committees to work on standards for the form for library identifiers, holdings statements, and unique identifiers for records without an LC card number. WILCO will seek western representation on national committees or groups discussing these standards.

6.5: The state agencies, service centers, or utilities should arrange to acquire on a regular basis the new catalog and holdings records generated by western libraries using utilities or commercial vendors. These records should be used in immediately building state/regional union finding lists and on-line holdings files.

Impact:

At a time when the cost of maintaining union card catalogs for location information has reached a questionable level, technology has provided a cheaper and more effective tool. In many western states, the major libraries are already obtaining cataloging records from machine-readable sources. These records can be cheaply, easily, and frequently merged to provide an immediately useful union catalog of recent acquisitions that can be distributed throughout the state as well as being maintained on-line and that would replace the current practice of sending an extra main entry card to a union card catalog for filing. When seeking to borrow a recently published item, requesting libraries could quickly scan the union catalog to find what other library holds the desired material, and verification would be essentially automatic rather than the occasionally time-consuming chore it now is.

GOAL 7: COLLECT AND PROVIDE ACCESS TO RETROSPECTIVE HOLDINGS DATA FOR KEY RESOURCE LIBRARIES AND SPECIAL COLLECTIONS IN EACH STATE, CONSISTENT WITH STATE AND MULTI-STATE PLANS FOR RESOURCE SHARING.

Strategy: Selected holdings data reflected in bibcenter and machine-readable catalogs or inventory control files in various libraries (designated for each state) may be collected, cumulated, and merged with current holdings data files developed under Goal 6. Holdings data records will be linked to corresponding bibliographic records by LC card number or other standard identifier. Cumulation will be done as a stepwise process rather than in one costly fell swoop so that cost-effectiveness can be evaluated along the way, and before any major conversions of manual files are made solely for the purpose of obtaining holdings data.

Tasks:

7.1: In consultation with the identified key resource libraries, WILCO will recommend a policy concerning what items should have holdings data recorded in regional files and how the files should be updated as items become lost, weeded, or transferred to another library.

7.2: One or two states will identify which libraries should be included in the retrospective holdings lists to be produced as a first step, and will make necessary arrangements with service centers, utilities, or vendors to obtain the data and merge it with the current holdings data files. This task should make maximum use of existing machine-readable records.

7.3: The retrospective holdings file created as a result of the preceding task will be made available for use and evaluation through one of the utilities or service centers. WILCO will assist the one or two test states in evaluating the costs and benefits of retaining on-line access to the retrospective holdings and of adding the holdings of other libraries in the test states and of libraries in other western states.

7.4: As libraries that are contributors to manual union catalogs shift to report their holdings in machine-readable form, the manual catalogs should be closed and their final disposition determined. Before any money is spent in manual file conversion, the cost-benefit of the conversion must be demonstrated in comparison with other access methods for the data such as distributed microform copies of the file or continuing to engage a staff of file searchers to answer location requests for older materials. Plans for retrospective conversion of any one file shall consider region-wide needs and the impact on other union files.

Impact:

This is a low risk approach to the gradual accumulation of retrospective holdings data needed for interlibrary loan. The location function of a bibliographic record is distinguished from the cataloging function. This means that records used for location purposes need not be the same as those used for cataloging; thus holdings data, for convenience and economy, can be maintained in local or subregional files rather than in the utilities' data bases, and skimpy or partially inaccurate cataloging data can be tolerated. Service centers or states could maintain holdings files for libraries in their area, with the communications system providing access to other holdings files.

GOAL 8: DEVELOP AND ADOPT POLICIES AND PROCEDURES AFFECTING RESOURCE SHARING TO MAKE THE MOST EFFECTIVE USE OF THE CAPABILITIES PROVIDED BY LIBRARY NETWORKING.

Strategy: Availability of networking services and products, showing which libraries have what materials, provides opportunities for states to set a standard of self-sufficiency (to reduce costs and delays of resource sharing), allow patrons access to a wider variety of materials, speed the delivery and return of borrowed materials, lower interlibrary loan and other resource sharing costs, and set up cooperative acquisition agreements.

Tasks:

8.1: The WILCO staff will assist each member state library agency at its request to monitor the interlibrary loan and other resource sharing activity in the state, on a sampling basis, to identify areas in which service could be improved or costs reduced and to assess the impact and effects of the availability of holdings and cataloging data.

8.2: BALLOTS, OCLC, WLN, and the service centers, should, as a part of their task to develop a communications network, design as well a message switching capability for ILL. With this capability in place, a borrowing library should be able to search the on-line catalog file (at whatever set of utilities the file may be distributed) to verify the citation, then be automatically transferred to the holdings file for the region to discover which library has the desired item. The system should then automatically generate a loan request and transmit it to the lending library, consistent with mutually agreeable interlibrary loan protocols and policies. Alternatively, if the lender has a circulation control system, the borrower should be able to access that system to determine the item's availability and to check it out or reserve it. (This task is not likely to be completed within the three-year time frame.)

8.3: WILCO staff will investigate the technical, economic, social and political consequences of current and alternative policies for interstate library resource sharing and will recommend policies to reduce costs, improve access to information, and compensate for imbalances between net-lending and net-borrowing states and major institutions .

8.4: WILCO staff will assist service centers, in conjunction with using and resource libraries, in obtaining or developing improved document delivery and photocopying services.

Impact:

Widespread access to holdings information may affect patterns and costs of interlibrary loan. The centralized or hierarchical ILL networks now in existence help to spread the lending load among libraries, but at an additional cost. When a requesting library can determine for itself who else has a desired item, there is a possibility that the lending load may not be spread equitably, but the total cost for ILL may be reduced since fewer messages will be required to complete a transaction and verification can be accomplished more easily.

V. ASSUMPTIONS

This view of the goals and tasks for western libraries and networking components over the next three years is posited on a number of assumptions about the shape of the resource sharing environment during that time. These assumptions must be re-examined frequently because they are likely to change greatly as time goes on, and the changes may affect the completion of the initial set of tasks.

The assumptions are as follows:

1. No agency will be able to constrain the autonomy of utilities, service centers, or libraries using network services. A relatively free market economy will operate so that users will react to price and service factors in deciding what network products and services to purchase, and from whom.

2. Three bibliographic utilities, BALLOTS, OCLC and WLN, do or in the near future will have on-line bibliographic systems supporting cataloging and other operations such as acquisitions and serials control. This computer-based support is available to libraries in some or all of the western states.

3. The utilities may be impelled to interconnect because of economic factors and the need to provide access to holdings of many different libraries.

4. Users are likely to demand the capability to use more than one utility, with the same terminal and similar procedures and protocols. This interface will be provided to a degree by the minicomputer systems used to interconnect the utilities. (To provide this capability completely will likely require a redesign and reprogramming of major portions of the utilities' software.)

5. It is not economical for all the utilities to process and store all nationally distributed catalog records (except possibly for recent MARC records), or to maintain large numbers of unused records in on-line storage.

6. Circulation transaction control can be performed most economically with local computer equipment, particularly the equipment that can support local functions in addition to circulation control. It is assumed that in the future local circulation systems and utility cataloging systems will be interconnected.

7. The number of minicomputers installed in libraries may double by 1979.

8. LC files may be accessible for on-line searching; MARC in 1978 and the Automated Process Information File (APIF) and Subject Headings in 1979-80.

9. A single national cataloging data base will not be available, but by the end of 1979 older MARC and COMARC records will be available from LC files.

10. A single national holdings data base is not economically justifiable. Regional or type-of-library subsets, however, are.

11. Libraries participating in on-line cataloging systems will be expected to assume the responsibility of inputting bibliographic records in full MARC format to the best of their ability. Some utilities will have quality control procedures to assure record quality; WLN is one such system.

12. Among the OCLC, LC, BALLOTS and WLN set of utilities, probably only WLN and LC will provide authority control mechanisms in their own computer systems within the next few years. The other utilities may use the LC authority control system via interconnection.

13. While we cannot predict the uses that will be made of the LC authority files, we can predict that the impact will be great. The capability of easy access to LC authority files may have wide-ranging implications for future maintenance of catalogs.

14. The bibliographic utilities may find it desirable to encourage users to access the utilities via service centers.

15. Service centers will likely handle access to more than one utility.

16. As more libraries use automated cataloging it will no longer be necessary to maintain manual bibcenter files for current acquisitions.

17. Some service centers by 1978 will be planning for, or have, minicomputer systems for data concentration and message switching.

18. In addition to on-line files there will be value in having bibliographic and holdings information available in other forms, such as microfiche.

19. Librarians will urge that computer terminals in their libraries be multi-functional and able to connect to any utility.

20. Telecommunication services commercially available will change greatly as new companies, services and rates appear.

21. A national library network plan will evolve as a result of utility, service center, state and regional planning, in conjunction with LC and NCLIS.

22. There will tend to be a geographical hierarchy for data base development and resource sharing.

23. States will increasingly strive for self-sufficiency in terms of information access.

24. Some states will maintain union catalogs in support of interlibrary loan, using the data and technology provided by vendors, the utilities, or local data processing centers.

VI. SCHEDULES

During the remainder of 1976, the tasks agreed upon as a result of discussion of this document will need to be described in greater detail and scheduled by the parties concerned in accord with the priorities of each party. At the national level, the Library of Congress, in concert with NCLIS, CLR, and other library groups, is engaged in determining how LC should contribute to the development of library networking. National priorities need to be balanced with regional, state, and individual organizations' priorities. WILCO and its staff will assist western and national organizations at their request in preparing detailed work plans for activities that affect more than one organization.

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APPENDIX H

WESTERN COUNCIL CHARTER

CHARTER OF THE
WESTERN COUNCIL ON CONTINUING EDUCATION AND LIBRARY RESOURCES PROGRAM
OF THE
WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION*

The Western Interstate Commission for Higher Education (hereinafter referred to as the Commission), recognizing the need for regional development of continuing education for library personnel and the orderly sharing of library resources, has authorized the organization of a planning group to be known as the Western Council on Continuing Education and Library Resources Program (hereinafter referred to as the Council).

I - FUNCTIONS

The functions of the Council shall be to:

Recommend to the Commission policies and priorities relating to continuing education for library personnel and the orderly sharing of library resources in the West.

Provide a medium for exchange of ideas and sharing of experiences by western state library agencies and institutions of higher education and other appropriate groups which offer library education programs and which are concerned with sharing of library resources.

Identify needs with respect to continuing education in librarianship and orderly sharing of library resources and network development.

Undertake cooperative planning for continuing education programs for library personnel within the western region under the auspices of the Commission.

Undertake cooperative study and planning for orderly sharing of library resources and network development within the western region under the auspices of the Commission.

Stimulate research in librarianship with colleges and universities and other appropriate groups.

Adopt and recommend budgets to implement the above.

Engage in other library related services or activities which the Council may from time to time determine to be appropriate.

Programs of the Council shall not, however, inhibit or interfere with programs sponsored by individual members of the Council.

II - FUNDING

The programs of the Council shall be funded by the member states and by gifts, grants, and contracts in a manner to be determined by the members of the Council.

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*Revised and approved at the Western Council Annual Meeting, July 29, 1974, Boulder, Colorado.

III - MEMBERSHIP

Section 1. Eligibility.

Membership in the Council shall be open to state library agencies located in the states which are parties to the Western Regional Education Compact.

Section 2. Representation.

Representatives to the Council shall be named by the State Librarian of each library participating in the Program; the representative need not be a staff member of the library.

Section 3. Withdrawal.

Members may withdraw from the Council by giving six months notice of intent.

IV - MEETINGS

Section 1. Meetings.

The Council shall meet at such intervals and at such places as may be required to conduct its business. Meetings shall be held upon the call of the Chairman, upon the written request of three members, or at the request of the Commission. The first meeting of the fiscal year shall be designated as the Annual Meeting of the Council. Expenses of representatives attending Council meetings shall be borne by the Council.

Section 2. Voting.

Each official representative of a state library agency holding membership in the Council shall be entitled to one vote.

V - OFFICERS, TERMS, DUTIES

Section 1. Council Officers.

The officers of the Council shall be a chairman and a vice-chairman. The officers shall be elected at the Annual Meeting of the Council.

Section 2. Terms.

The term of office shall be for one year or until successors have been elected or appointed and qualified.

Section 3. Duties.

The officers shall perform the usual duties of their respective offices, including the following:

(a) Chairman. The chairman of the Council shall: prepare agenda for the meetings; appoint committees; represent the Council in the intervals between its meetings; report at the next following meeting of each body all action taken in its behalf.

(b) Vice-Chairman. The vice-chairman of the Council shall: perform all duties of the chairman of the Council in the absence of the chairman.

VI - COMMITTEES

Section 1. Committees.

The Council may at any meeting authorize the creation of such committees as it deems necessary and appropriate, and may fix their size, duties and tenure.

VII - PROFESSIONAL STAFF.

Section 1. Professional Staff.

The Council shall have the services of a professional staff whose members shall be on the staff of the Commission and shall serve as administrator of Council programs.

Section 2. Functions.

The professional staff shall provide secretarial services and coordinate the work of the Council.

VIII - ADVISORS

Advisors, ad hoc and ex-officio, may be appointed to assist and advise the Council as needed.

IX - DISSOLUTION

The Council may be dissolved by vote of three-fourths of the funding members.

X - ADOPTION OF CHARTER

This Charter shall become effective upon the assent of the state library agencies whose representatives' signatures appear below. In giving its assent, each library recognizes that it has committed itself to work with the other parties to the Charter in developing continuing education programs for library personnel and stimulating the orderly sharing of library resources and networking in the West.

IN WITNESS WHEREOF each party to this Charter has affixed its seal and signature on the date indicated.

Charter of the Western Council on Continuing Education
and Library Resources Program
of the Western Interstate Commission for Higher Education

IN WITNESS WHEREOF each party to this Charter has affixed its seal and signature on the date indicated.

__________________________ for the State of
(name)

____
(title)

____
(date)

__________________________ for Western Interstate Commission for Higher Education
Executive Director

____
(date)

APPENDIX I

WILCO BROCHURE AND NEWSLETTERS #3, #4

WILCO CONTINUING EDUCATION PROGRAM

WILCO seeks to improve library services in the West through a coordinated ongoing program of continuing education for library personnel (and involved lay leaders) at all levels and in all types of libraries and information centers.

WILCO's objectives are to coordinate and relate the continuing education offerings from states, professional associations, library schools, networks, and others to the continuing education needs in the West, and to facilitate the delivery or development of continuing education resources.

The continuing education goals of **WILCO** are to:

- Coordinate continuing education resources (programs and personnel) and activities in the region
- Assist in the development and implementation of local, state, and regional continuing education plans.
- Operate, in cooperation with **CLENE**, a clearinghouse (**WESTEX**-Western Continuing Education Exchange) to gather and exchange information on continuing education resources
- Facilitate access to and delivery of continuing education materials and evaluations
- Sponsor or co-sponsor courses, seminars, workshops, etc. that meet western continuing education needs
- Undertake or coordinate the development of new materials
- Relate, as a member of **CLENE**, regional activities to national developments
- Create an awareness of the need for continuing education

BENEFITS OF WILCO

WILCO is an innovative multistate library program that takes full advantage of the diverse human and institutional resources of its participants and adds the benefits of WICHE's accumulated multiprogram experience and know-how in order to ensure continued improvement in the delivery of library services in the West.

Benefits to member states and the region include:

1. A strong voice in regional and national network planning via the **WILCO** forum.
2. An ongoing, objective, full-time staff available for consulting and devoted to facilitating resource sharing and continuing education.
3. Assistance in assessing state and multistate library needs and plans.
4. An information exchange and clearinghouse for resource sharing and networking.
5. Research in resource sharing, networking, and continuing education.
6. A voice in regional and national telecommunications planning.

For more information, contact:
Eleanor Montague, Director
Western Interstate Library Coordinating Organization
WICHE
P.O. Drawer P
Boulder, CO. 80302
(303) 492-7317

W WILCO

September 1976

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Western

Interstate

Library

Coordinating

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Western Interstate Commission for Higher Education
P.O. Drawer P. Boulder, Colorado 80302 • (303) 492-7317

WILCO STRUCTURE

WILCO (Western Interstate Library Coordinating Organization) operates under the direction of the Western Council of State Librarians from the member states. Helen Miller, Idaho, chairs the Western Council, and Roderick Swartz, Washington, is Vice-Chairperson through June 1977.

The Western Council ratifies **WILCO** policies, approves the budget, evaluates program performance, and initiates new programs. Directors of resource libraries, computer-based bibliographic utilities, service centers, regional networks, and other library leaders in the West are invited to participate in setting **WILCO** objectives and guiding staff activities.

Currently, the states of Alaska, Arizona, California, Idaho, Montana, Nevada, Oregon, South Dakota and Washington are **WILCO** members.

WILCO is one of more than 50 programs at WICHE (The Western Interstate Commission for Higher Education), with offices at WICHE headquarters in Boulder, Colorado. The library program began at WICHE in 1968 in response to continuing education needs in the West. Other WICHE programs are in the areas of student exchange, student internships, minority education, higher education management systems, nursing, and mental health.

WICHE is the instrument of an interstate compact among the 13 western states and is governed by a Commission of 39 persons, 3 appointed by the governor of each of the 13 WICHE states. WICHE's Executive Director is Phillip Sirotkin.

WILCO FUNDING

The core budget for **WILCO** is funded by membership fees from state library agencies that are **WILCO** members. Additional funds for specific activities and research come from grants and contracts.

WILCO STAFF

The **WILCO** staff includes:
Eleanor Montague, Director
Karl M. Pearson, Jr., Technical Coordinator
Maryann Kevin Brown, Cost and Funding Analyst
Anita L. McHugh, Staff Assistant
Mary Haenselman, Secretary

WHAT IS WILCO?

WILCO is a unique *forum* for library leaders in the West to catalyze and coordinate *multistate* programs in:

Continuing Education,
Resource Sharing,
Networking and
Library and Information Science Research

Building on the strengths of state-based library systems and other organizations, **WILCO** promotes mutual understanding and focuses the energy, money, and talents of western librarians on cooperative and innovative activities for improving library services to all citizens in the western states.

WILCO retains a small staff to provide, on a continuing basis:

- Coordination of western library interests and activities with other regional and national developments
- Coordination of state and regional development to make more effective and efficient use of library resources
- An information exchange and clearinghouse for resource sharing and networking
- **WESTEX**—Western Continuing Education Exchange to coordinate and exchange information on continuing education resources
- Delivery and development of continuing education resources
- Assessment of state and multistate library needs
- Long-range planning to meet future library needs
- Consulting by arrangement with member states on special projects
- Research in resource sharing, networking, and continuing education
- Assistance in library cost analysis.

WILCO activities are reported in the **WILCO** Newsletter, published ten to twelve times annually, and in special reports, published occasionally and available through WICHE.

W **WILCO** E

WILCO FORUM FOR RESOURCE SHARING AND NETWORKING

WILCO, operating under the sponsorship of the Western Council of State Librarians provides a catalytic forum and a continuing staff resource to foster multi-state, cooperative library resource sharing and networking efforts, consistent with national directions.

For member states and the region, **WILCO**

- Provides a regionwide mechanism to address problems of and propose solutions for more effective resource sharing and networking.
- Provides a formal link among major organizations in order to exchange information and reduce redundant development
- Concentrates energy, money, and talents on cooperative and innovative activities
- Acts as a clearinghouse for information on available systems and services and their use, cost, availability, and installation
- Facilitates regional research and development programs and identifies new areas for research
- Identifies computer capabilities and data bases available in the West, and helps to identify ways of extending these capabilities to libraries in the West.

Through the **WILCO** forum, library leaders in the West have defined resource-sharing goals in the document: *Library Networking in the West: The Next Three Years.*

WILCO RESEARCH PROJECTS

Each year, **WILCO** undertakes various research projects that are consistent with basic program, state, and regional goals.

For example, **WILCO** has been awarded a grant for 1976/77 from the Office of Education to "Develop and Demonstrate a Statistical Data Base System for Library and Network Planning and Evaluation." This plan will use the **NCHEMS** (National Center for Higher Education Management Systems at WICHE) data base structure and software. The project will have a national advisory committee to ensure compatibility with existing statistics systems. The result will be a working system with well-defined cost data elements to assist library managers in decision making.

Currently, **WILCO** is completing two other special projects. One is entitled "Design and Development of a Western Interstate Bibliographic Network," funded by the Council on Library Resources, and the other is entitled "Cost and Funding Studies Concerning Development and Implementation of a Western Interstate Bibliographic Network," and is funded by the Office of Education.

WILCO NEWSLETTER**

Western Interstate Library Coordinating Organization

May 1976 No. 3 ISSN: 0361-9478

WILCO

The WICHE Continuing Education and Library Resources Program has a new name: WILCO -- Western Interstate Library Coordinating Organization. WILCO is the general name for the integrated WICHE program, encompassing continuing education, resource sharing, and library and information science research. WILCO will be used to refer to all program areas of the integrated WICHE Library Program Thus, WILCO will be used in place of the term "Western Network" that has been used recently in reference to part of the total program (two grant projects - CLR and USOE - currently underway). The new name more clearly reflects the facilitating and coordinating role anticipated for the WICHE program.

WILCO, governed and funded by the Western Council of member state librarians, will provide unmet packaged and customized continuing education needs and a forum for resource sharing and interstate cooperation in the West. It will provide a coordinating role among the existing regional networks, bibliographical centers and computer systems (components) and in continuing education activities.

The functions of WILCO will evolve and change as needs in the West are identified and prioritized. WILCO plans include activities to:

- Provide a region-wide forum for planning and cooperation;
- Provide a formal communication link among major organizations in order to exchange information and keep up to date on new research and development, special projects and specialized resources and expertise;
- Identify specialized expertise in the region and facilitate access to this expertise;
- Gather specialized information, upon request, for WILCO members and disseminate this information to others;
- Provide a clearinghouse for information on available systems and services and their use, cost, availability, etc., as well as continuing education offerings;
- Maintain files on new hardware, technologies, communication systems and continuing education packages, and make this information available to WILCO members;
- Provide a focal point for needs expressed in the region;
- Provide an established mechanism to address problems of and propose solutions for improving resource sharing, continuing education, data collection for planning purposes, and library cost analysis.
- Actively work with the major bibliographic systems to promote coordinated development, "record interchange," terminal interchangeability, common communications protocols; promote system compatability in light of planned developments at the Library of Congress and NCLIS;

** Formerly, Western Network Newsletter

- Study existing components in the West and propose a methodology for meshing the activities that could result in a reasonable, cost-beneficial, effective multi-state system with a broad range of activities;
- Facilitate regional research and development programs to reduce redundant development and identify new areas of research;
- Work out a cost-beneficial strategy for building a regional machine-readable data base; determine the most effective and cost justifiable mix of access to the data (on-line, fiche, etc.);
- Identify computer capabilities and data bases available in the West; help to identify ways of extending these capabilities to libraries in the West;
- Provide a forum to discuss telecommunications requirements and to help standardize communication interfaces, especially in light of emerging distributed mini-computer networks.
- Undertake analytical studies as needed to support continuing education and resource sharing;
- Play a coordinating, facilitating, communicating and experimenting role in the areas of continuing education for library personnel and resource sharing.

WILCO is a unique organization in the West; it gives the region an objective clearinghouse for information and a staff ready to address resource sharing, continuing education and cooperative planning problems and needs that cannot economically or feasibly be done on the local or operating level. For more information on WILCO, please contact Eleanor A. Montague, WILCO Director, WICHE, P. O. Drawer P, Boulder, Colorado 80302 (303) 492-8150.

MARYANN DUGGAN RETIRES FROM WICHE

Maryann Duggan, WICHE Library Program Director since April 1974, has announced her retirement effective July 15, 1976. Those of you who have had the opportunity to work with Maryann can appreciate how much she will be missed. She plans to travel, do some writing, and a little consulting. "After working almost without vacation for 31 years, I am looking forward to a slower pace. Besides, I feel confident that we now have in Eleanor Montague, Karl Pearson and Maryann Kevin Brown the best possible staff. This culminates my goals to rebuild the WICHE Library Program and leave it in good hands."

COST AND FUNDING STUDIES

The Cost and Funding Studies being conducted under the USOE grant entitled, "A Proposal for Conducting Cost and Funding Studies Concerning Development and Implementation of a Western Interstate Bibliographic Network" are well underway. One hundred libraries around the West are cooperating in an analysis of current technical processing costs and interlibrary loan traffic volume and patterns. Twelve of these 100 libraries have been invited and have agreed to participate in an in-depth analysis of technical processing and interlibrary loan costs.

A series of data collection instruments have been developed for the study of current costs and interlibrary loan. These instruments were pre-tested in several libraries in Idaho and are now in use in the sample of 100 libraries and with the 12 case studies. They have been designed to be self-administering (procedures are included for all parts of the forms) and widely useable.

The data collected during the cost studies in the 100 libraries will be released at the conclusion of the grant project in early August. In FY77, WILCO will offer cost analysis services, by arrangement, to libraries and states in the West based on these data collection instruments and the associated analytical computer processing programs.

PLANNING MEETINGS SET

Consistent with the goals of the CLR-funded network design project, WILCO is sponsoring an invitational meeting of representatives from the computer bibliographic systems (BALLOTS, WLN and OCLC), and the regional bibliographic centers and library networks (CLASS, BCR, PNBC, and the California State Library Union Catalog). The meeting, to be held on June 2 and 3 in Palo Alto, will address future cooperative plans and specific tasks for completing the current CLR project. On June 4, 1976, the CLR project Executive Board will meet, also in Palo Alto.

At the request of the CLR project Executive Board, the WILCO staff has drafted a preliminary statement on goals and tasks to advance interstate, inter-regional library cooperation and resource sharing over the next few years. As a first step, this preliminary statement will be reviewed, discussed and modified by those attending the Palo Alto meetings. As a second step, the resulting revised draft statement will be reviewed by the Western Council, the CLR project Steering Committee, the ARL librarians and other western state librarians. As a third step, the resulting draft statement. will be made available for general distribution. Comments on the draft will be welcomed, solicited, and may be addressed to Western Council members or the WILCO staff, so that there can be established a basic foundation for orderly and collaborative development of resource sharing activities in the West.

USOE/WICHE STAFF DEVELOPMENT INSTITUTE UPDATE

Institute participants from 41 libraries in 12 states are now completing their plans for implementing staff development activities in their library or at the state level. These plans were critiqued by the Institute staff and resource people at two Problem-Solving Clinics during April. A Staff Development Model Book highlighting essential, as well as unique, features of the plans developed during the Institute will be issued by WICHE in July. Participants come from academic, large and small public libraries, state libraries, as well as library schools and state coordinators for school libraries. Thus, the Staff Development Models should have broad applications. For additional information on availability of the Staff Development Model Book, contact Ann Peckham or Sue Middleton at the Boulder WICHE office, (303) 492-7310.

UNION LIST OF SERIALS FOR MONTANA

As reported earlier, Montana has been conducting an analysis of serial data bases and systems based on a survey done by WILCO. According to Erling Oelz, Project Coordinator, Montana has selected the Minnesota Union List of Serials (MULS) as the contractor for the Montana union list. The first edition, in microfiche, is expected by October 1976.

Thirty collections will be included in the first edition, representing academic, public and special libraries; all types of serials will be represented, including state documents and newspapers. The project, funded in this first phase by LSCA Title I funds, was initiated by the Montana Library Association.

REMINDER

The following WICHE document is still currently available: A Review of Potential Components for a Western Bibliographic Network (Catalog #28121), April 1976, 70 p. (2nd edition) $2.50. Briefly describes many of the organizations and agencies in the western states that might play a role in the development of networking and improved resource sharing in the West, describes the computer-based bibliographic utilities and some of the data bases available, and discusses telecommunications requirements and services available. Requests should be addressed to Publications Unit, WICHE, P.O. Drawer P, Boulder, Colorado 80302. Please include payment with your request.

COOPERATION AMONG NATIONAL NETWORK SYSTEMS TOPIC OF LIBRARY OF CONGRESS MEETING

On April 12, the Library of Congress hosted a meeting to "explore the requirements for and possibilities of increased cooperation among the major components of the evolving national system." The Council on Library Resources, Inc., funded the travel costs for the ten invitees, which included representatives from OCLC, WLN, BALLOTS, NELINET, AMIGOS, RLG, University of Chicago, SOLINET, NCLIS, CLR, CCLN, and WILCO.

In anticipation of LC playing a more positive role in network planning at the national level, this was one of a series of meetings with various groups to clarify "the question of the proper relationships among the developing systems and the Library of Congress." Some of the activities suggested as appropriate for LC were:

- centralized input of MARC records;
- provision of machine-readable authority files;
- provision of bibliographic data in various formats (in addition to MARC Communication Format).
- on-line access to bibliographic data bases and authority files;
- monitor and investigate telecommunications requirements;
- conduct studies and do national planning on alternative sites for and optimal number of bibliographic data base locations;
- conduct studies and formulate national policies on system interfaces and interconnection, and record exchange;
- conduct studies on uses of mini-computers in on-line networks;
- clarify and recommend geographic and functional areas of responsibilities for existing networks;
- continue to develop new services; and
- assist existing bibliographic utilities in developing activity plans for the next five to ten years.

The meeting was co-chaired by William J. Welsh, Deputy Librarian of Congress, and Henriette D. Avram, Special Assistant for Network Planning in the Office of the Librarian. We at WILCO are pleased to see the Library of Congress taking this much needed leadership role in national network planning, coordination and operation.

W WILCO
NEWSLETTER
WICHE ROOM 219
P. O. DRAWER P
BOULDER, COLORADO 80302

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WILCO NEWSLETTER

Western Interstate Library Coordinating Organization

July 1976 No. 4 ISSN: 0361-9478

WILCO AWARDED USOE GRANT TO DEVELOP AND DEMONSTRATE A STATISTICAL DATA BASE SYSTEM FOR LIBRARY AND NETWORK PLANNING AND EVALUATION

WILCO has been awarded $59,000 from the U.S. Office of Education to develop a statistical data base system for library and network planning and evaluation. In addition the project will be supported by $17,728 in matching funds from WILCO member states. The statistical data base system will present a means of gathering, organizing and disseminating the kinds of data needed for resource allocation decisions within a library or a network of libraries. The system is intended as a basis for modeling alternative outcomes from various resource allocation decisions, the impact of changes in resources on library services, etc., and for other types of manipulations necessary for decision-making.

The system will be based on the data file structure and software developed by the National Center for Higher Education Management Systems (NCHEMS) which are used in over 800 post-secondary educational institutions. The system will be designed, demonstrated and evaluated in the West, but will be of value to the entire library community. A national advisory board composed of representatives from national organizations concerned with library statistics will insure technical quality and compatability with on-going data gathering activities (such as HEGIS and LIBGIS).

The activities and products of the project are aimed at making a maximum impact nationally on the collection, processing, and use of library statistics in decision-making for library services.

The results of the work will be a working system for using library statistics, with standardized cost data elements and definitions. User manuals and other tools for operating the system will be published, together with the findings of the study. During the grant period, the system will be demonstrated at different levels of the library community.

ACCESS TAPES AVAILABLE THROUGH WILCO CONTINUING EDUCATION PROGRAM

WILCO has purchased a complete set of the ACCESS tapes (16 video tapes and 20 Study Guides). The whole set or individual tapes may be borrowed from WILCO by member states. The borrowed tapes should not be used for reproduction. However, a WILCO member state can purchase the set or individual tapes through WILCO at a 20% discount. For more information, please write or call WILCO, P. O. Drawer P, Boulder, Colorado 80302, (303) 492-7317.

NEW TELEPHONE NUMBER

As of July 19, all WILCO staff members can be reached at a new telephone number: (303) 492-7317. For those libraries participating in the Cost and Funding Studies, Maryann Kevin Brown or Anita McHugh can also be reached at (303) 492-8188.

Western Interstate Commission for Higher Education P.O. Drawer P, Boulder, Colorado 80302, (303) 492-7317

Edited by Eleanor A. Montague

WILCO CE (CONTINUING EDUCATION) PROGRAM

In addition to resource sharing/networking coordination and library and information science research, a primary WILCO program area is continuing education.

The goals of the WILCO CE program are to:

1) Coordinate CE resources and activities in the West;
2) Assist in the development of need and problem statements at the local, state and regional level;
3) Participate in CE planning and coordination at the regional level with the regional library associations, library schools, etc., and at the national level with CLENE and NCLIS;
4) Provide, in cooperation with CLENE, a clearinghouse (WESTEX - Western Continuing Education Exchange) to coordinate and exchange information on existing CE resources (materials and personnel) in order to:
    - maximize use of existing resources,
    - reduce redundant development,
    - identify areas for new development to meet specialized or common needs;
5) Facilitate access to and delivery of CE materials, services, programs, etc.;
6) Assist in evaluating CE programs, materials, etc. and in making this information available throughout the West;
7) Sponsor or co-sponsor programs, seminars, etc. of interest in the West and undertake or coordinate the development of materials to meet specialized or common needs or problems;
8) Foster the use of a reward system, such as CEUs (Continuing Education Unit), consistent with national plans.

The task at hand is to translate these goals into positive action and more effective and efficient use of CE resources to meet needs in the West.

Several projects are underway:

1) ACCESS tapes are available to member states for borrowing or purchase through WILCO (see separate article in this issue of the WILCO Newsletter).
2) Planning is in process for region-wide seminars in areas of common interest. WILCO will shortly announce the details of a series of "Preservation of Library Materials" seminars. Other seminars addressing areas of common interest or problems will be discussed and planned for the future.
3) WILCO is now an organizational member of CLENE and will work closely with the national organization.
4) WILCO has actively begun to gather information on CE programs, materials, etc. in the West. This is intended as complementary to CLENE's program of information acquisition and coordination. As appropriate, information on western CE resources will be reported to CLENE.

The WILCO CE program is dynamic, as it should be to best serve the CE needs of the West. We welcome your comments, inquirires, ideas -- whatever. Please contact Eleanor Montague at WILCO.

STAFF DEVELOPMENT INSTITUTE - Model Book and Final Report

The WICHE/USOE Institute for Training in Staff Development has just completed its year-long program intended to initiate and strengthen staff development capabilities in libraries, systems and agencies in the West. Forty-one librarians from 13 states participated in the Institute. An immediate outcome from the program is expected to be increased staff development efforts in each participant's organization. In the long run, WILCO looks to extending this kind of effort beyond the participants, through dissemination of the models they have developed and by working with each state as it plans for staff development needs.

A major outcome of the Institute is the publication entitled "Staff Development Model Book: Program Designs for Library Personnel" which contains the models developed by Institute participants for use in their home organizations. These models contain a wide variety of approaches which can be reviewed and considered by others interested in staff development. Each model has a brief critique.

The final report of this Institute includes not only narrative and evaluative descriptions of the Institute itself, but also contains, as Appendix C, the Model Book. The final report is being distributed to the joint funding sources -- U.S. Office of Education and members of the WILCO Western Council -- as well as to the Institute participants, their administrators, and others directly involved in the Institute. The Model Book is also available as a separate publication. (See "Publications Available" section of this issue of the WILCO Newsletter for more information.)

COOPERATIVE NETWORK PLANNING MEETING

As noted in the previous issue of the Newsletter, planning meetings were held in Palo Alto, California, on June 2-4. The purposes of the meetings were threefold: to review and revise the draft document entitled "Library Networking in the West: The Next Three Years;" to discuss specific future network cooperative activities; and to receive input on project status and future plans from the Steering Committee Executive Board. Participating in the meetings were:

H. Vince Anderson, South Dakota (Executive Board)
Lura Currier, Pacific Northwest Bibliographic Center
Hank Epstein, BALLOTS Center
Gerald Newton, California State Library
Mary Jane Reed, Washington Library Network
Gerald A. Rudolph, University of Nebraska (Executive Board)
H. Paul Schrank, Ohio College Library Center
Donald Simpson, Bibliographical Center for Research
Roderick Swartz, Washington (Executive Board)
Earle Thompson, Pacific Northwest Bibliographic Center (PNBC Brd. Chairman)
David Weber, Stanford University (Executive Board)

Eleanor Montague, WILCO
Karl M. Pearson, Jr. WILCO

The document "Library Networking in the West: The Next Three Years," as revised during the three-day meeting, plus proposal plans for future cooperative activities, will be discussed by the Steering Committee on July 17 in Chicago, and by a meeting of western bibliographic system, center and network directors, also in Chicago.

STEERING COMMITTEE MEETING

The final meeting of the Steering Committee for the grant entitled "Initiating the Design and Development of a Western Interstate Bibliographic Network" (CLR 614) will be held on July 17 in the Wabash Parlor of the Palmer House in Chicago. The Steering Committee will be discussing general project status, WILCO status, the USOE Cost and Funding Studies, the draft planning document entitled "Library Networking in the West: The Next Three Years," and potential future cooperative activities. Invited to join the Steering Committee are the WILCO Western Council of State Librarians, other western state librarians, western ARL directors, and representatives from bibliographic centers, networks and systems.

PUBLICATIONS AVAILABLE

The following WILCO publications are available at cost from the WICHE Publications Unit, P. O. Drawer P, Boulder, Colorado 80302. Please include payment with your order.

- Staff Development Model Book: Program Designs for Library Personnel (Catalog #2B122). June 1976, 131 p. $2.50
- Final Report of the WICHE/USOE Institute for Training in Staff Development, June 1975 - June 1976 (Catalog #2B123). 235 p. $5.00
- WILCO Technical Processing and Interlibrary Loan Cost Data Collection Instruments (Catalog #2B124). June 1976 $5.00

NOTE: The WILCO Users Manual for Cost Data Collection in Technical Processing and Interlibrary Loan describing the computer programs used to manipulate, summarize and format the cost data for output will be available for sale by the end of August.

WICHE HAS A NEW EXECUTIVE DIRECTOR

Dr. Phillip Sirotkin, formerly Executive Vice President, State University of New York at Albany, has replaced Dr. Robert Kroepsch as WICHE Executive Director. Although Dr. Sirotkin comes from New York, he is quite familiar with WICHE. In fact, he is a former WICHE staffer. He served in the late 1950's under Dr. Harold Enarson and was a major force in the creation of the Mental Health Council.

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APPENDIX J

USOE COST AND FUNDING STUDY SUMMARY

PUBLICATIONS RESULTING FROM THE USOE-SPONSORED COST AND FUNDING STUDIES

In addition to the survey instruments used to gather cost data from the 100 libraries and 12 case study libraries involved in the USOE-sponsored cost and funding studies, the following publications represent the final products resulting from that project:

1. Survey of Costs in Technical Processing and Interlibrary Loan -- Survey Tables and Case Studies Results

   This document contains the detail tables, information, and data collected and analyzed during the cost studies from 100 libraries and 12 case studies.

2. Survey of Costs in Technical Processing and Interlibrary Loan -- Summary

   This document provides an overview and summary of the results of the cost survey. Summary tables present analysis of data without stratification by library type.

3. Librarian's Handbook for Costing Network Services

   Provides suggestions and instructions to enable librarians to survey current costs and estimate cost/benefit results if they were to use network services.

4. Costs in Technical Processing and Interlibrary Loan -- Data Processing Users Manual

   Provides instructions in use of programs available for processing cost data collected through self-administration of the instruments used in this study. The manual is intended for the use of librarians who wish to use the procedures and forms of this study to analyze technical processing costs in their own library.

5. Final Report of the Project "Conducting Cost and Funding Studies Concerning Development and Implementation of Western Interstate Bibliographic Network"

   Reports on the fourth (final) quarter of the project, and is analogous to this final quarterly report to CLR on the networking project.

APPENDIX K

ECONOMIC ISSUES IN THE NETWORKING OF LIBRARY TECHNICAL SUPPORT SERVICES

WILCO
Western
Interstate
Library
Coordinating
Organization

ECONOMIC ISSUES IN THE NETWORKING OF LIBRARY TECHNICAL SUPPORT SERVICES

By

Scott Gassler

October 1976

Western Interstate Commission for Higher Education • P.O. Drawer P. Boulder, Colorado 80302 • (303) 492-7317

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To obtain information or a copy of this publication contact:

Publications Unit
WILCO
Western Interstate Commission for Higher Education
P.O. Drawer P.
Boulder, Colorado 80302

Price per copy-$1.50

Catalog No. 1.5C:1076:WICHE:2B131

TABLE OF CONTENTS

I. INTRODUCTION 1

A. Overview. 1

B. Limitations on the Development of Library Economics 1

C. Definitions 2

II. THE MARKET FOR AUTOMATED SERVICES 6

A. A Monopoly on Automated Services? 6

1. Is there a natural monopoly in automated services?. . . . 6
2. What happens to other types of monopolies?. 7
3. What should be done about a monopoly in automated services? 8

B. Automated Services as an Oligopoly. 8

C. Which Type of Market? 9

III. THE MARKET FOR BROKERED SERVICES. 10

IV. WHERE DOES LC FIT IN? 11

V. THE EFFECTS OF NETWORKING PER SE. 12

VI. WHO SHOULD PAY FOR WHAT?. .14

A. Equity and Efficiency 14

B. Problems. 15

1. Data records. 15
2. Seed money, research and development. 15
3. Costs of administration of pricing policy 16
4. Intergovernmental fiscal relations. 16
5. Implications for libraries. 16

VII. CONCLUSION. 17

VIII. APPENDIX. 18

A. Assumptions 18

B. Acknowledgments 19

C. Bibliography. 20

ECONOMIC ISSUES IN THE NETWORKING OF LIBRARY TECHNICAL SUPPORT SERVICES

I. INTRODUCTION

A. Overview

The purpose of this document is to acquaint administrators of American libraries and library-related organizations with a few economic issues which will become increasingly important as the concept of a national technical-services network develops. This concept includes reference, interlibrary loan and so on in addition to technical services, and the discussion here can apply to a network of larger scope. The National Commision on Libraries and Information Science, the Library of Congress, managers of automated bibliographic centers and other service organizations, and the people who run libraries should find this paper a nontechnical and nonquantitative guide to some of the possible economic pitfalls and problems that will face the library community.

The economic issues to be discussed include:

(1) What kind of industry will supply libraries with automated technical services? Will it be a monopoly? What difference would it make if it were?

(2) Where will regional organizations like NELINET fit in?

(3) Where can the Library of Congress fit into the network? As a supplier? Competitor with other organizations?

(4) What is the economic significance of the fact that members of a network must cooperate?

(5) How should different automated and other networking services be paid for? Pricing in a market system? Government subsidy? Some combination of the two?

None of these questions can be answered here, but the issues they raise from the point of view of economic analysis, will be explained. Since this document is intended only as an outline of questions, research in the areas discussed will be suggested, as well as tentative policy objectives.

This report is a product of the cost and funding studies conducted by the Western Interstate Library Coordinating Organization (WILCO) under Grant No. G 00 7500741 from the U.S. Office of Education. The overall goals of the project are to determine representative costs of library services in areas of potential network support, evaluate the impact of network services upon librarian costs, and examine the economic issues and implications of networking. This document has been produced to fulfill the third goal; other WILCO documents address the other two goals.

B. Limitations on the Development of Library Economics

There has yet to be developed a complete economic theory of the library industry, which is regrettable from the points of view of both the economics and the library professions. From the Librarian's point of view, it is regrettable because the lack of an economic theory specifically adapted to libraries inhibits the library administrator from the full use of what could be a valuable tool. From the economist's point of view, it is regrettable because libraries have to be among the most complicated and interesting phenomena of economic life: all of the complexities and subtleties of economic theory seem to converge and overwhelm attempts to come to grips with library problems. Moreover, the very aspects of economic theory which would seem most central to analysis of library-related problems are among the most underdeveloped: the economics of nonprofit and government agencies, subdivisions of large organizations, and cooperatives, as well as the economics of information and of social services. However well the standard economic models work elsewhere, they may not work at all for libraries, and new ones may need to be developed.

There are also unsolved problems in library network planning, for instance, in the nature of different types of hierarchical files: what types of information should be held regionally (e.g. holdings records), and what types nationally and locally? How can it best be arranged for a library in one region to have access to files of another region? How do you cope with the problem that a regional file may include entries from both a national data base and local ones?

In spite of the limitations of our abilities due to unanswered questions we can still say some useful things. Standard economic theory has insights that can help us raise interesting and relevant questions, and some of the questions librarians may think are solely technical (such as those above on network planning) will turn out to have economic dimensions.

C. Definitions

For purposes of this paper, we give the following definitions. Some of them are taken from the document, Library Networking in the West: the Next Three Years, fifth draft, 22 September 1976, by the WILCO staff.

Automated bibliographic center (ABC). An organization offering computer-based support for technical and public service operations to a number of libraries. Examples include BALLOTS at Stanford University and and the computer operation portion of the Ohio College Library Center (OCLC) and the Washington Library Network (WLN). Commercial vendors of cataloging and on-line retrieval services can also be considered as ABC's. The Library of Congress (LC) may also act as an ABC in the near future in allowing access to its on-line files. Note that the same organization may have both ABC component and a service center component (e.g. WLN, OCLC).

These organizations have been called "utilities", but there are disadvantages to this term. Some people in the library profession object because of its connotations to librarians and others, and economists use the term in two ways not identical to its use here. Since all the organizations in this group provide automated services, and since ABC is an easily remembered acronym, we use it here. Other WILCO documents still use the term "utility", and we send this alternative term as a "trial balloon" with their blessing.

Automated services. The output of automated bibliographic centers. The market for automated services has ABC's as suppliers and service firms as demanders.

Brokered services. The output of service firms. The market for brokered services has service firms as suppliers and libraries as demanders.

Costs. Economists categorize costs under two broad headings: variable costs, which vary according to the quantity of output, and fixed costs, which do not. Fixed costs are those which during the time period under consideration are the same whether the firm produces anything or not. Examples would be rent for the building, perhaps payments on the equipment bought to produce the output, and any costs incurred in contracts extending throughout the period under consideration. Variable costs would include raw materials or other materials used in the production of each unit of output, such as seeds for a farmer, steel for an automobile manufacturer, or catalog cards for a librarian. To an economist, cost includes discounts, bonuses, and all other relevant considerations figured in.

It is not always easy to decide what costs are fixed and what are variable, even when the relevant period of time has been decided. How do we categorize research and development, new computers, buildings to house them, seed money for pilot projects, rental of telephone lines, or messages between two or more computers? They can be either, depending on how the categories are interpreted. The problem, however, is not trivial, because it is the variable costs which have the most direct effect on price, and the fixed costs pose a problem as to how they should be paid. Both these considerations are discussed in the section on who should pay for what.

Demand. Desire plus the ability to pay. Generally speaking, the higher the market price of a good or service, the smaller the quantity demanded.

Firm. An organization, which in our usage can be profit-making, non-profit, or government-operated.

A library which is part of a government or another organization, and the library component of an agency such as LC, will be considered here as an independent firm. The same is true for a service firm.

Grant. A one-way transfer of goods, services, or money by one person, firm, government, etc., to another.

Library technical support services. Activities performed by service firms to assist libraries in acquisition, cataloging, serial check-in, and book processing. For our purposes, we exclude administration (of the library as a whole), circulation, and interlibrary loan. Such services may be automated services or brokered services.

Market. An economic institution through which exchange takes place. In a modern economy using money, it usually consists of a demand side (people who want to buy a good or service and have the money to pay for it) and a supply side (people who are able to sell the good or service and will do so for money). Generally speaking, the higher the market price of a good or service, the more of it will be supplied and the less of it will be demanded, and there will be a price at which the quantity demanded and the quantity supplied will be equal. If the price were higher than that, the quantity supplied would exceed the quantity demanded, i.e. there would be a surplus, and the price would fall. If the price were lower than that, the opposite would occur (there would be a shortage) and the price would rise. (The market price properly includes discounts, bonuses, and all other considerations, not just the list price.)

We can think of the library technical support services industry as consisting of several markets. The market for automated services (Mkt. A in Fig. I-1) consists of ABC's as suppliers and service centers as demanders. The market for brokered service (Mkt. B in Fig. I-1) has service centers on the supply side and libraries on the demand side. There is also a market C, with LC supplying cataloging data to the ABC's. LC could deal directly with service centers and thus we could loosely say it enters Market A, since the service centers would now treat LC catalog data as a close substitute for the services of ABC's. The same is true if it deals directly with libraries; we would then say it enters Market B.

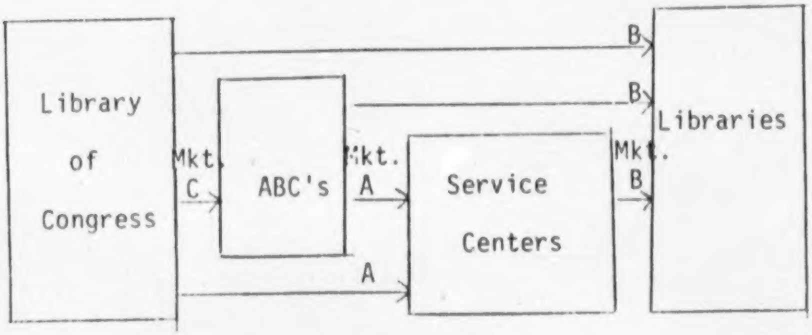

Fig. I-1.

Service center. An organization acting as a broker of computer-based services from one or more ABC's in a particular region or the operator of other bibliographic services such as maintaining a union file of location information or a photocopying center. Examples are: AMIGOS Bibliographic Council, Bibliographical Center for Research (BCR), the California State Library's Union Catalog (CSLUC), the Pacific Northwest Bibliographic Center (PNBC), and the service distribution portion of the Washington Library Network (WLN).

Service firm. An organization which supplies libraries with library technical support services, automated or not. A service firm may be either an automated bibliographic center or a service center.

Supply. Ability to produce a good, at a cost. Generally speaking, the higher the market price for a good, the larger the quantity supplied.

Vertically-integrated firm. A firm which combines two or more activities that otherwise would be separate, sequential in a production process, and traded through markets. For example, and ABC that acts as its own service center is a vertically-integrated firm; for our purposes, we can say that it sells automated services to itself and then turns around and sells brokered services to libraries. Whether a firm chooses to become vertically integrated depends on a lot of economic, political, and other factors.

II. THE MARKET FOR AUTOMATED SERVICES

What are the possbile ways that the market for automated services can develop? Presently there are several firms supplying automated services, with some differentiation of the good supplied: for example, WLN has a controlled authority file capability with the on-line data base, unlike OCLC or BALLOTS. (BALLOTS does not deal entirely through service centers, and WLN not at all; OCLC deals directly with libraries in Ohio and California. However, all three could deal through centers. Here we think of them as selling automated services to themselves in Market A and then turning around and selling brokered services in Market B. The fact that all three are to that extent vertically integrated does not affect the analysis.) There are also differences in the technological compatibility of the services with each other, but we have assumed that these are surmountable, for purposes of our discussion here.

An important question, then, is whether there is some reason to believe that there will continue to be several suppliers in Market A, or only one monopoly supplier of automated services. We examine each of these possible market structures in turn.

A. A Monopoly on Automated Services?

A monopoly exists when one firm can dominate the supply side of the market and become the sole supplier of the good or service being traded in that market. According to most, though not all, economists, there are at least two undesirable qualities about monopoly. The first is that it will generally be tempted to produce too little output and charge too high a price. The second is that a monopoly will have little incentive to innovate.

Most monopolies tend to be rather short-lived, if left to themselves; as other firms notice the higher profits earned by the monopoly in its market, they will try to enter it. Other firms can usually be expected to succeed in entering the market and destroying the monopolist's privileged position (though not necessarily the monopolist firm itself).

1. Is there a natural monopoly in automated services?

There is one type of monopoly which may not be short-lived, and that is the "natural" monopoly. A natural monopoly exists when one firm can produce a given output more cheaply than if it were produced by two or more firms. Therefore, the larger firms can charge a lower price than the smaller ones, and eventually the largest firm will grow large enough to take over the entire market. Natural monopolies are thought to exist in such industries as railroads and the telephone industry: it may pay to have one set of tracks between two cities, but not two, and it would be more expensive to run several phone lines to each house to hook up to several phone companies in a single area rather than to have just one. (It is difficult to gather accurate and unambiguous cost data in many cases, however, so economists differ over whether one or another industry really is a natural monopoly.) This is one of the reasons why such industries are regulated or even operated directly by the government (e.g. the U.S. Postal Service, even after the reorganization, which still left it an arm of the government rather than a privately-owned firm).

A firm providing several services could be a natural monopoly in one and not in another. For example, an ABC could be a natural monopoly in computerized data-base maintenance, but find that servicing of computer terminals may be less costly or of higher quality if left to service centers.

2. What happens to other types of monopolies?

There are several other ways in which a monopoly can try to establish or preserve its privileged position besides being lucky enough to be a natural monopoly. If the government can be persuaded to prohibit other firms from entering the market, the monopoly can become officially sanctioned and backed up by the power of the state. European countries used to grant monopoly status to trading companies in the New World and elsewhere, and the patent and copyright laws of today are a limited form of the same thing.

Other tactics can include driving out competition through "predatory" price-cutting: lowering your price even to below cost until your rival is forced to close its doors, then raising your price to the monopoly level. (Some economists deny this is economically rational, since the predator will suffer losses too, but again most economists probably believe it is possible.) Or asking customers to sign a contract promising to deal with only one firm. Or forming an agreement among all firms to limit output and divide the profits, thus causing all firms to behave as if they were a single firm. These practices are illegal for profit-making firms in the U.S.

Would it be possible for a nonprofit firm to engage in such practices? This is partly a legal question and partly an economic one, which depends on the particular model used to describe the behavior of nonprofit firms. It may be that nonprofit firms can find creative ways of forming monopolies that are not open to profit-making firms. Foundation grants might be a possible way: if the firm can convince a foundation to offer grants for the purchase of automated services, say, then the grant has the effect of a cut in price as far as the purchaser of automated services is concerned, and the firm will still receive the same price for the service. There is nothing in this procedure to help the firm become a monopoly, unless the grant specifies that it is to be used only for the services of one particular firm. Then the grant can have the effect of giving that firm the ability to gain monopoly power.

Another way would be for the firm that wishes to establish a monopoly to attempt to have its customers sign a contract that restricts it to purchase from only one supplier. Something which would have the same effect would be to sell the customer a set of items all of which are compatible with each other but none of them, bought singly, compatible with items sold by another firm. For instance, an ABC could design (or have designed for it) terminals which could communicate with its own computer but not with the computers of any of its competitors. This in itself would not have the effect of creating a monopoly, but it would make it more difficult for a customer to switch ABC's. Or the ABC (or service center, for that matter), could threaten that if a library withdraws from a contract, it cannot get at its own records stored at the service firm. This could make the cost of concelling a contract astronomical.

3. What should be done about a monopoly in automated services?

The two types of monopoly are traditionally dealt with in two different ways. The natural monopolies are subject to government regulation of the prices they charge, the quantity of output they produce, or both. The other monopolies are prevented or broken up by government antitrust action. Of course, everything does not always work as planned, but in general that is the conventional wisdom.

Concerning regulation of the price and quantity of a monopoly, two points should be made. First, it is quite an empirical problem to determine just what the market price and quantity should be. Since the monopolist will likely have not done it, the government regulatory agency may find itself doing it, and in any case one would hope it would be at least rechecking the monopolist's figures. Second, an issue has come up in the general public recently that has also bothered economists. That is the political one of who controls the regulatory agency that controls the monopolist (or other industry). In some cases, it is beginning to appear as though the regulatee might be regulating the regulator as much as the other way around. It is necessary for the regulatory agency to exchange information with the firm, but it destroys the purpose of the regulatory agency for it to become so close to the industry that it fails to regulate in the "public interest" (defined here to mean setting the proper price-output combination rather than the monopolistic one).

Can the production of automated services be considered a natural monopoly? Will one ABC be able to take over the entire industry by producing a larger output at a lower cost? If so, should the automated-services market be regulated as are the telephone and railroad industries? If so, what agency should do the regulating? An existing one or a new one? Should it be operated directly by the government? Only research into the relation between cost and output of ABC's can answer the first two questions, and only informed political choice can provide an acceptable answer to the others. The questions, however, should be explored now, before vested interests make the problem more difficult.

B. Automated Services as an Oligopoly

If one firm does not dominate the market and create a monopoly, several large firms may end up with the bulk of the job of supplying services in the automated-services market. This is called oligopoly. Unfortunately, whereas in economics there are definite theories about behavior in monopolistic and perfectly-competitive markets, there is no single theory about behavior in oligopolistic markets. However, certain general statements can be made.

In oligopoly, nonprice competition comes into its own: product differentiation, advertising, attempts to negotiate exclusive contracts with customer, offers of rebates, introduction of new products, etc. The variations are endless, which is one of the barriers to a simple theory of oligopoly. One interesting question is whether there can be sufficient product differentiation in the automated-services market such that several firms, rather than just one, will be able to survive. Among ABC's there is some product differentiation. OCLC provides a different range of services than either WLN or BALLOTS, and WLN is the only one with the capability for a completely controlled authority list. There is also a great deal of research and development done by all three of these ABC's, which is not inconsistent with the existence of oligopoly.

The dangers of oligopoly are not only that it will continue to exist with the same problem as monopoly of price that is too high and output too low, but also that it can turn into something else. A small number of firms can find it much easier to get together and form a cartel than can a large number of perfectly-competitive firms. As a cartel, they can jointly set prices, output, and even divide up the market on a territorial basis. These actions would make the oligopoly into one big monopoly or several smaller territorial monopolies, with all the problems of such. Cartels and their implications for networking (and vice versa) are discussed later.

C. Which Type of Market?

The automated-services market is likely to be either an oligopoly, as it appears to be now, or a monopoly. There are good and bad points about either one, and it is not clear at this time which one is more likely to develop. Two things, however, are clear enough. The first is that steps should be taken now by the members of the library community to prevent artificial barriers to competition which would tend to encourage cartels or unnatural monopoly. The second is that there needs to be research into the cost structures of the automated-services industry in an effort to determine whether a natural monopoly exists or whether the optimal size of an ABC is only large enough for one firm to take a part of the market. Since technological change can drastically affect market structure, this research would need to be ongoing. It is in the interests of the libraries as ultimate users of automated services that these activities be begun.

III. THE MARKET FOR BROKERED SERVICES

The market for brokered services (Market B, as we called it) has the libraries themselves on the demand side and the service centers on the supply side. We are sidestepping the question here of what exactly comprise brokered services, but all we need to know is that they will make access to the ABC's cheaper through the broker than directly from the library to the ABC; and may offer products and services tailored to their clientele in addition to the ABC facilities.

One question which might arise is in the area of economic dynamics: Libraries which are part of state or local governments typically operate on annual or biennial budgets. Does this make the market less able to respond quickly to changes in technology or other conditions? Also, contracting by government-related libraries may take longer and operate under more rigid rules (e.g. award to lowest bidder) than by private firms: does this make it more difficult for a library to get out of a contract it no longer wants or to switch from one supplier to another or from one type of service equipment to another and therefore make libraries more reluctant to enter into them in the first place? Could it also make it harder for a library to act in unison with others? There is another reason, too, why nonprofit and government agencies may be slower to respond to changes in environment than profit firms: they cannot go bankrupt. So how can they be made flexible enough to change their functions or even go out of existence when they have outlived their usefulness in their present form? This is always done, of course, but it is sometimes thought to be more difficult for nonprofit organizations.

Again there are questions of market structure. Can the service centers remain monopolies, each the exclusive seller of brokered services in its own geographic area? Will there be other firms competing with service centers to provide some of the services they provide? (Local chapters of professional associations also hold meetings and issue newsletters, for example, and it is theoretically possible for LC to maintain a single holdings file in one giant computerized National Union Catalog -- or, more likely, for the ABC's to perform that function.) And the ABC's themselves could simply begin acting as their own brokers, as OCLC does in Ohio and California. In any case, it is possible to have a monopoly in either the market for automated services or the market for brokered services, or both. However, a monopoly in the former would affect the latter directly, not only because the output and price of automated services would affect the output and price of brokered services, but also because a monopoly in automated services might be able to have a say in the creation of new service centers and therefore might be able to engineer directly a monopoly in the brokerage market.

There needs to be research in the cost structures of service centers in the same way as for ABC's, and in the relation of service centers to the ABC's on the one hand and the libraries on the other. In addition, library administrators would do well to look for ways to increase their flexibility and ability to respond quickly to changes in market situations.

IV. WHERE DOES LC FIT IN?

The Library of Congress is a very special case. It is at once a library, its own service center and its own ABC. It is also the supplier in Market C, the market for cataloging data for the ABC's.

In Market A, LC could become an ABC for others by agreeing to supply cataloging data, a close substitute for automated services, directly to the service centers, bypassing the existing ABC's. (Indeed, when LC stated that it would supply "networks" with cataloging data, it did not specify what it meant by a "network", so it could have meant service centers as well as ABC's.) That would put LC as a supplier of a close susbtitute for the product in Market A, i.e., LC would be in effect competing with ABC's. But the other ABC's depend on LC for cataloging data. Could LC affect the viability of the other ABC's in the market for automated services by refusing to sell, or limiting its sale of, catalog data to the other ABC's? Would it simply become less costly for service centers to deal directly with LC? Or do the other ABC's offer sufficiently differentiated services that service centers would find it useful to deal with both LC and another ABC? There are services which OCLC, BALLOTS, and WLN offer that LC could not reasonably be expected to provide.

In Market B the Library of Congress could perhaps compete directly with the service centers as a supplier of its own brokerage services to the libraries, if it were able to deal directly with all libraries in the country. This rather unlikely possibility could happen if LC were to decide to maintain a national location file, as mentioned before, which would include location information about all libraries in the country, and if libraries were able to search that file directly in the manner of the SDC and Lockheed data bases. It could also happen if LC data (MARC, Automated Process Information File, and the authority files) were open to on-line searching by other libraries, through their own computers or terminals. (The Research Libraries Group is not an example of this. It is a vertically-integrated firm, part ABC and part broker, which deals with several academic libraries.) The reason this is unlikely is that LC does not seem to have the personnel and equipment to deal with libraries directly, but service centers are willing and able to provide the services instead.

LC no doubt is greatly concerned with its role in a national network, and can be expected to take seriously the economic consequences of its actions as well as those of others in the network. One would suspect, then, that LC will wish to make its services as widely available as possible, and that it would insure that it does not unduly favor one firm or type of firm over another. This does not mean that LC should try to do everything for everybody, but that whatever it does for the network will be done for all participants on an equal basis. Because this goal is more difficult to follow than it might appear at first glance, LC should make it a point to monitor its activities in the network and their economic effects on a continuing basis.

V. THE EFFECTS OF NETWORKING PER SE

In addition to the economic problems connected with the mere existence of libraries, service centers, ABC's, etc., there are questions relating to how all these organizations might work together in an integrated network.

One question is: what are the consequences of cooperative arrangements among ABC's to share data? It is expected that there will be developed systems of telecommunication such that the ABC's will be able to transfer data from one computer to the other, even as they maintain their own internal procedures. Would this be enough to allow existing ABC's to form a cartel? A cartel is a group of suppliers who agree to band together to operate as if they were a single monopoly, producing at the monopoly output and price. They then act to divide the monopoly profits among them according to some agreed formula. Cartels do not have to be small or even consciously arranged; some economists claim that the American Medical Association is an example of a cartel. They are, however, unstable unless the government can be induced to enforce the cartel agreement, according to many economists. There are incentives to stay in the cartel, but there are also incentives on the part of each firm to cheat on the cartel. The cheating firm then gets the best of both worlds: a share of the profits of the cartel, and the income from selling a little bit extra to a buyer at a lower price than the cartel agreed to. This of course has to be done secretly, not only because the rest of the cartel would act to enforce their agreement if they found out, but also because the other buyers would then try to hold out for the lower price. However, if the government can "regulate" the industry in such a way as to limit the number of suppliers to those who can meet the "standards" set high enough to insure the monopoly output and price, or if the government can set the price at the monopoly price, or both, then the power of the law is added to enforce the cartel agreement. The problems in this regard resemble those of a regulated monopoly; indeed, a regulated cartel is the same thing, in effect.

Many of the organizations in the markets for library technical support services are themselves government agencies or nonprofit firms, and the Library of Congress may have a hand in setting the standards, for the data itself if not the transmission. Would that be enough to raise the danger of a legally-enforced cartel? Maybe and maybe not. LC, as the dominant supplier of cataloging data to the ABC's, and as a government agency in a position to set standards, could be in a position to enforce a cartel. If establishment of a standard language is enough to keep out potential competitors to the ABC's, and LC does not agree to supply "anyone" in the position of a potential competitor, as we said before, then the library community may find itself with an LC-backed cartel.

Just because suppliers trade with each other either goods or information does not in itself mean that there is a cartel. On the contrary, many firms trade with each other even though they are in competition, and arrangements could certainly be made among ABC's to trade data on a basis that avoids the dangers of cartels.

Another question relating to networking per se is the consequences of the possible hierarching of certain kinds of data on a regional basis. It has been suggested that certain types of information could be more profitably kept on a regionally hierarchical basis, with much-used location information kept at the regional level, other information of less-frequent use at the level of larger regions, and little-used information at the national level. In this case there could be a situation with territorial monopolies: each service center or ABC would be a monopoly in its own region, and say, LC a monopoly for information held at the national level. On the other hand this could occur only if the cost of maintaining a file in the central location plus the cost of telecommunication exceeded the cost of maintaining a number of possibly smaller files in many locations. If, for example, any ABC could store the holdings records for the entire country's libraries, and any new additions to the data base of one ABC were sold to the others, then they could all compete to provide the same holdings information to any library in the country. This, however, is a matter for research to determine empirically.

A further question concerns standardization. There may be some libraries willing and able to pay higher prices for higher-quality data (for instance, data in a data base with a controlled authority list), and some who would be willing and able to pay only lower prices for lower-quality data. Is the network flexible enough to accommodate both, or will standards be set so high as to exclude some of the latter group?

Librarians should encourage the free flow of information from one ABC to another while watching out for possible cartels. They should also act to insure that a network allows them to keep their options open: if it is cheaper to deal with an ABC close by for most services, they should also be able to call on another ABC farther away if the latter provides some unique service that the library can use. Service centers should not be prevented by law, contract, or tacit agreement from dealing with more than one ABC if they find it is in the interests of the libraries they service, and the same is true for libraries in relation to the service centers and ABC's. Librarians should also act to influence the ABC's to trade data while keeping a watchful eye out for possible cartels.

VI. WHO SHOULD PAY FOR WHAT?

We may now have reached the point in our discussion where we can say something about approaches to the problem of how the costs of providing library technical support services can be shared among the libraries, different levels of government, and the private foundations and corporations.

A. Equity and Efficiency

How should costs be shared? The question has to do with equity, in this case the ability to provide something we could call "equal access to information" by all libraries regardless of where they are in the country, and efficiency, that is, the ability to provide incentives to producers to provide the proper amount of their services in response to supply and demand.

The choice traditionally preferred by economists is a combination of grants and pricing. The government is called upon to redistribute income among demanders in such a way as to provide "equal access". This takes care of equity. The government is also called upon (under certain conditions) to underwrite the fixed costs of the program, because there is no economically reasonable way to apportion fixed costs among libraries. The market is then relied upon to set the price according to supply and demand. This takes care of efficiency.

For political or other reasons it may not be possible to implement this arrangement, so other types of systems can be devised. One alternative is price discrimination to cover all costs in a way that distributes the burden according to the wealth ("ability to pay") of the librararies.

Price discrimination occurs in such areas as telephone service (business rates vs. household rates) and movie theaters (discounts for students and senior citizens). However, it is usually thought that price discrimination can occur only under certain conditions. First, it often has to be done by a monopoly or a cartel; otherwise competition among suppliers would force the price to be the same for all customers, as the demanders who were charged higher prices shopped around for better bargains. The phone company is a regulated monopoly, of course, and the theater is usually a monopoly in a small area for that movie. Second, the demanders must have different responses to differences in prices; otherwise they would all end up being charged the same price by a discriminating monopolist or a non-discriminating monopolist. Third, they must be unable to resell the good they buy; otherwise the demanders charged the lower price could buy extras and resell them to the other demanders at a price higher than they paid but lower than the monopolist was trying to charge the other demanders. It is debatable whether either the market for automated services or the market for brokered services meets all of these conditions. On the other hand, it is at least theoretically possible that price discrimination by a regulated monopoly could achieve the same results as the grants-and-markets arrangement preferred by economists.

B. Problems

Within the area of grants and markets, there are several problems, not necessarily peculiar to the library industry, that nevertheless deserve special attention.

1. Data records

An interesting arrangement has been suggested by at least one of the ABC's. A library which enters a new bibliographic record into the data base in order to have it for its own use, as well as that of other libraries who wish to use it, gets a rebate if the record is "resold" or used by another library. This device is intended as a stimulus to libraries to input records of high quality. In other words, a library can pay for automated services in money or in kind. There is nothing unusual in this arrangement -- barter has existed longer than trade with money -- however, if an ABC using this procedure becomes a monopolist in the selling of automated services, it would thereby possibly become a monopsony in the purchase of computer input, and can therefore be in a position if it wished of purchasing too little of it at too low a price. Whereas a monopolist is a single seller, who sells too little at too high a price, a monopsonist is a single buyer who buys too little at too low a price. Some of the dangers of monopoly can also occur with monopsony.

Automated bibliographic centers also are beginning to consider trading data with each other. Of course, it may be quite a headache to determine the value of a single entry into a data base. It may simply be better to stick to some standardized pricing arrangement (such as treating all records as equal in value) than to try to be too exacting about it. More on the administration of pricing below.

2. Seed money, research and development....

Who is to pay for the pilot projects, special studies, and research and development related to networking of library technical support services? This question is asked in general by economists in relation to all such activities. The answers vary quite a bit more than in many other areas of economic analysis. It might be argued that all these activities are really the production of information, and therefore should be publicly funded; indeed, the federal government is a large provider of research and development money to the private sector, if not of the actual research itself in some cases. On the other hand, some economists argue that private industry does very well as far as innovation is concerned. As a matter of fact, monopolies are sometimes said to be quite good at producing new technologies, perhaps better than other types of market organization, because of their ability to accumulate large amounts of money. So it may be that this question is answered for library technical support services in the same way as for the rest of the economy: research and development is financed by all kinds of sources in all sectors. At this stage of the development of economics, there is not much more that can be said, except that, since most libraries or government bureaus, and most service centers and ABC's are either government bureaus or closely related to government bureaus (e.g., governed to some degree by agents of them), then most of the research and development should probably be paid for by the government. Since the research and development would benefit the entire country, it should logically be the federal government that plays the major role.

3. Costs of administration of pricing policy

Sometimes firms are not able to charge prices for some goods according to the most elegant economic models because the cost of determining what that price should be turns out to be greater than the firm thinks it will gain by fine-tuning its pricing. Butter and napkins at a restaurant are served free even though they cost the restaurant money to provide them, and even though the more customers there are the more butter and napkins must be put out. Other times firms may price according to broad categories rather than try to set a different price for each individual case. The post office charges the same amount for a letter to Portland, Maine, as to Portland, Oregon, even though it costs them more to send it one place than to the other almost no matter where you mail it from. Likewise they charge by the ounce or fraction of an ounce rather than trying to break the weight of a package down any further than that. On the other hand, some things can be metered fairly closely: the telephone company knows how many calls you made this month, what numbers you called, and how long you talked. One ABC has decided to start charging for searching transactions, for example, rather than absorbing those costs in a single price structure. So pricing is not as easy as it looks sometimes to an academic economist, so the latter's elegant models may have to be modified before they can be of practical use to the library community.

4. Intergovernmental fiscal relations

To say that the government should finance one or another activity is not to say which government. There are many different layers of government and it makes a difference which one is asked to pick up the tab. This is quite a complex problem, and only two remarks will be made here. First, to the extent that the benefits of a particular activity are confined to one jurisdiction, it would seem reasonable for the government of that jurisdiction to pay for it and not a smaller or larger one. Union lists are now often kept by states or groups of states, and catalog information is generated by LC. Second, the idea of equity can apply every bit as much to the relation among governmental units as to the relation between a government and its citizens (or libraries, as we've discussed). That is, the federal government or a state government may make grants to local governments in an effort to equalize access to information from one local jurisdiction to another.

5. Implications for libraries

The library community should look seriously at the problems of pricing and grants in terms of their goals of efficiency and equity. A criterion of equity should be agreed upon, and the market allowed to establish efficiency, within the limits set by government policy designed to prevent improper monopolies or cartels. Research and development for the network as a whole should be a national responsibility, and for each ABC or service center should be the responsibility of that particular firm. The former can be funded directly from public funds and the latter through the market. The ABC's and service centers can be relied upon to price their products according to the best practices they can, with an eye toward the administrative costs involved in different pricing policies.

VII. CONCLUSION

Can we have a national network of libraries, service centers, automated bibliographic centers, and government agencies without getting monopolistic firms or restrictive government regulations and interventions along with it? Do we want to? The questions have certainly not been answered here, but hopefully they have been asked in a systematic way.

It would seem that high priority in research could be paid to two things. First, economists need to devote more effort to develop models that describe the economics of nonprofit organizations and government bureaus, and the economics of information and knowledge. In the meantime, all we can do is use the standard models that were developed for profit-making firms, and hope they have some bearing on the problems of other organizations. Second, there needs to be empirical research, using whatever models are available now where necessary, into the nature of the costs facing each of the different organizations in the network, and thus into the structure of the markets for automated services, brokered services, and cataloging data. Economists, librarians and others in a cooperative effort can turn a problem that economist Kenneth Boulding once half-seriously called "impossible" into one susceptible to careful analysis.

Librarians, as the ultimate users of library technical support services and the ones who turn them into the final product for the benefit of the public, can influence the activities of service centers and ABC's by switching from one to another if they are dissatisfied with service, bargaining with an ABC or service center to change the mix of services offered, and working with the government to encourage research and development, redistribution of funds for equal access, and regulation of the service firms if and when that appears necessary.

VIII. APPENDIX

A. Assumptions

The following description is taken from Library Networking in the West: the Next Three Years, fourth draft, 11 August 1976, by the WILCO staff. It summarizes the relevant aspects of the state of the library networking world that we assume to exist in the near future, and upon which our discussion is based.

"The activities undertaken by the various organizations involved in... library cooperation should lead to increased integration of the bibliographic data, computer [services], communication systems, regional distribution and service organizations, and library resources... . The computers of [ABC's]... will be in the course of being linked to allow on-line access to files and the transmission of needed records from one to another [and to and from LC]. [Libraries] will tend to select a particular [ABC] for the bulk of their bibliographic service[s]... . An economical telecommunications network meeting the communications needs for libraries will be in development. Access to the [ABC's] will be supported by state or multistate service centers...each of which will serve states and libraries in a pattern consistent with efficient and effective service, training, maintenance, etc. [Libraries] will probably contract with the service center for processing support from one particular [ABC]... . There may be a movement towards maintaining...bibliographic records in a national file to reduce the burden of storing and processing redundant records at each [ABC]. There will be a movement toward coordination (nationwide) of bibliographic record creation and coverage of unique and non-print resources... . Holdings records may be maintained at local...state...regional...or central...locations [depending on their purpose]." (pp.2-3)

"The number of minicomputers installed in libraries may double by 1979... . LC files may be accessible for on-line searching [by 1978-80]... . Libraries participating in on-line cataloging systems will be expected to assume the responsibility of inputting bibliographic records in full MARC format to the best of their ability. Some [ABC's] will have quality control procedures to assure record quality... . The [ABC's] will continue to find it desirable to encourage users to access the utilities via service centers... . Some service centers by 1978 will be planning for, or have, minicomputer systems for data concentration and message switching... . We assume that in addition to on-line files there will be value in having bibliographic and holdings information available in other forms, such as microfiche, and that terminals in libraries will tend to be multifunctional... . Telecommunication services commercially available will change greatly as new companies, services and rates appear... . A national library network will evolve as a result of [ABC], service center, state and regional planning, in conjunction with LC and NCLIS." (p. 16)

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C. BIBLIOGRAPHIC NOTE

There does not seem to be a great deal written on the economics of libraries, let along library networks; that is one of the points of this paper. The following are samples of works in economics which may be of interest; it is by no means a complete nor even representative bibliography in the field.

For those totally unfamiliar with economics, a short introduction to microeconomics (the half of economics that most concerns libraries) is Robert Dorfman, Prices and Markets, (Englewood Cliffs, Prentice-Hall, 1971, paperback). The standard introductory text for college students for decades has been Nobel laureate Paul Samuelson's Economics (10th ed. New York, McGraw-Hill, 1976, 917 p.).

The economist whose name most quickly comes to mind when the subject of the economics of libraries is mentioned is William J. Baumol. He is known in the profession for his text Economic Theory and Operations Analysis (3rd ed. Englewood Cliffs, Prentice-Hall, 1972, 626 p.), which can be read after Dorfman or parts of Samuelson. His work in the library-related field includes Economics of Academic Libraries (Baumol and Matityahu Marcus, Prepared for the Council on Library Resources by Mathematica, Inc., American Council on Education, 1973,) and on the Economics of Library Operation (Final Report Submitted to National Advisory Committee on Libraries, June 30, 1967, Princeton, N.J., Mathematica ERIC document ED 022 525). His latest paper for the 1976 ASIS convention deals with production of scientific journals.

Kenneth Boulding takes a sweeping view of the economics of nonprofit activities, part of his concern with what is called "grants economics." His The Economy of Love and Fear; a Preface to Grants Economics (Belmont, California, Wadsworth Pub. Co., 1973) is a good overview, and his prose makes delightful reading.

One of the few other works overlapping in subject with this paper is Robert M. Hayes, The National Library Network, Its Economic Rationale and Funding (National Program for Libraries and Information Services Related Paper Number Nine. Washington, DC, NCLIS, December, 1974, 49 p. ERIC document ED 114 098). Written at the same level of technicality as this one, with a few formulae added and explained, its bolder and more decisive approach perhaps is a reflection of the author's long experience in the field. The present author's technical disagreements with standard economic models differ from those of Mr. Hayes, but the article is a valuable contribution worth looking at.

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APPENDIX L

FINANCIAL REPORT

(Supplied by WICHE separately)

APPENDIX M

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